

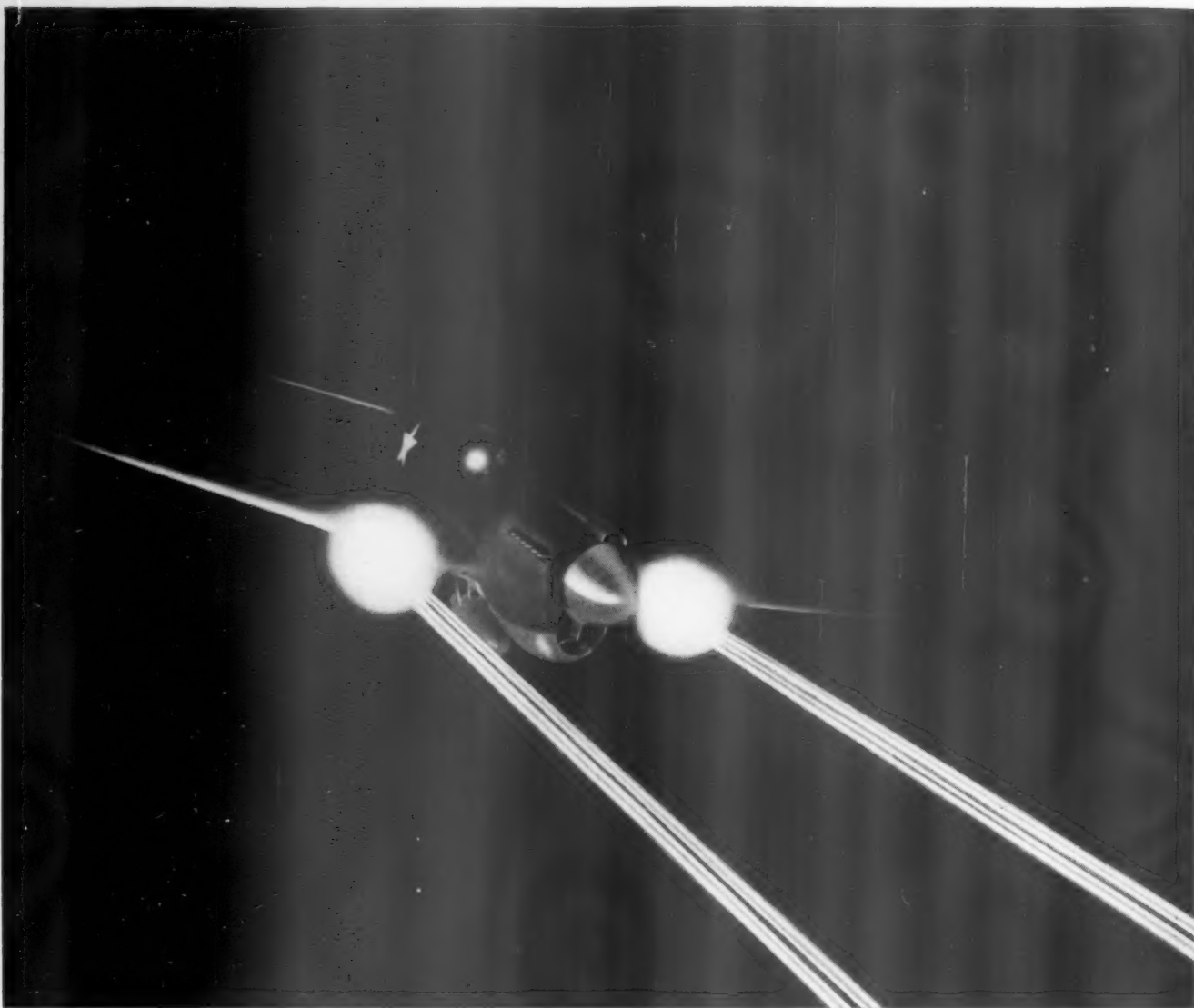
NATION'S BUSINESS

OCTOBER 1942

See
MANAGEMENT'S
Washington
LETTER



GENERAL LIBRARY
UNIVERSITY OF MICHIGAN
ANN ARBOR MICH



He's firing telephone wire at a Zero!

THIS fighter plane, with its six wing guns spitting fire, uses up enough copper every minute to make several miles of telephone line.

That's the right use for copper now — and it's the reason why we can't continue to expand our facilities to take care of the expanding Long Distance telephone traffic.

Right now, our lines are flooded with Long Distance calls. Most of them have to do with the war — they must have the right of way.

Will you help us keep the wires clear for war calls — industrial calls that send a plane down the assembly line — military calls that send it into the air against the enemy?

You can do it by keeping your own calls as few and as brief as possible. And you'll be bringing Victory that much nearer.

Bell Telephone System



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LARGEST IN THE BUSINESS FIELD
374,638 A.B.C.

**NATION'S
BUSINESS**

Chamber of Commerce of
the United States

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NATION'S BUSINESS for October, 1942

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America must have

20 MILLION

more Fighters

AMERICA as yet doesn't know its own strength. But America does know its own needs.

At the beginning of the year the nation's total labor force was 55 million. During 1942, employment on war production must increase from 6,900,000 to 17,500,000. In 1943 this figure will go beyond 20 million. At the same time the armed forces may be expected to add from five to eight million and the harvest of increased war crops will require additional millions of workers.

For every tool designer now available, 15 more are needed. For every toolmaker, 31 more must be trained. One ship's plate-hanger is available where 62 are needed and one crane rigger where 22 are required. And do not think that aircraft production is at the peak for 48 skin men are wanted for every one now available.

Thus, York is conducting a Manpower Survey throughout its headquarters plants and offices, branch plants and field offices. For York is finding out what its real war strength is . . . and now!

Among the more than 100 skills urgently needed in war work, the York Survey is discovering many where least expected. A master die-maker has been doing sales contact work in the field. Mechanical engineers who have been doing sales work are equipped for designing, production planning and shop executives' jobs. A clerk whose hobby is mathematics can help by bringing his talent to bear on factory time studies.

The returns, still incomplete, are reassuring on two points. First, York war production can be stimulated still more by readjustment of present personnel. Second, York people in the field who no longer can serve peacetime commerce and industry will find essential work, and plenty, within the York organization.

Manpower surveys and manpower readjustments must sweep all industry so that America may know her strength and apply it where it will do the most good. York Ice Machinery Corporation, York, Pa.

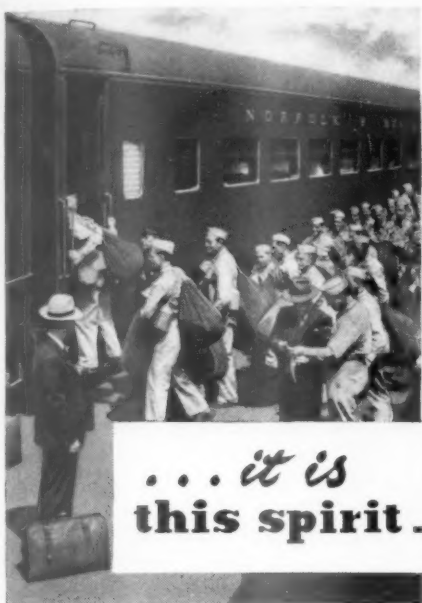


A copy of the questionnaire used in the York Manpower Survey will be sent to any executive requesting it on his firm's letterhead.

★

YORK REFRIGERATION AND AIR CONDITIONING FOR WAR

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



Newspapers, magazines, and military and government authorities have paid the railroads some mighty fine compliments for the smooth, efficient job they are doing in the transportation of our fighting men. These pats on the back are genuinely appreciated, and spur railroaders on to doing a better and better job.

And now, the Norfolk and Western wants to pay a compliment and express sincere appreciation to the folks in civilian life — who know and accept the fact that Uncle Sam's fighters come first with the railroads; who give the right-of-way to the men in uniform; who do not fuss or criticize when they have to take the best they can get in train travel.

It is this teamwork, this spirit of cooperation between civilian travelers, the railroads, and military authorities, that makes America invincible . . . that gives our fighting men the confidence and courage — to go places and do things!



**Norfolk
and Western
Railway**

Through the Editor's *Specs*

A sign in the sky?

DOES representative democracy work? It is often said that, to overcome depression, one-man control is essential; that, in the prosecution of war, one-man control not only of war services but of legislature and courts is required; that success for government can only come through men experienced in politics; that a business man can run a business but is ill-equipped to meet the problems of government.

Albert W. Hawkes, recently retired President of the Chamber of Commerce of the United States, has challenged all of the political propaganda against invasion of the political field by a business man. His philosophy is belief in the people, when they have the facts. In the campaign for nomination for Senator from New Jersey, Mr. Hawkes had to gain the support of the free and independent-thinking voters, who, he said, "hold in their hands the control of good government." Unwilling to compromise principles, he met the "I am for you, but—" of those who feared to meet issues. He won the support of free labor, organized and unorganized.

With full reliance on the citizens with understanding, a former President of the Chamber of Commerce of the United States, a successful industrialist, president of a large corporation, has won the nomination for Senator from New Jersey. He had no apology for his success as a business man and his voluntary service to organized business. He demonstrated his fair attitude toward labor. He expressed his confidence in the people. He smeared no one while asking for unity in winning of the war. He stood by the principles of representative democracy and the system of free men and won.

Our weapon, voluntary effort

THIS month, in "The Combat Teams of Industry 'Fall In,'" we report another phase of the war contribution by voluntary organizations of busi-

ness. The energy displayed by these national industry teams matches that of local community teams as related last month.

Old-timers will recall the tribute of Bernard Baruch, director of the War Industries Board of 25 years ago. He said then that without the trade associations the nation could not have mobilized our industrial resources for victorious combat as was done. And in future emergencies he predicted that they would again be of "incalculable aid" to the nation.

Mr. Baruch's prediction is being abundantly realized. At a moment when the spirit of voluntarism is on trial for its life all over the globe, when even here there is the urge for regimentation and compulsion, trade associations are giving a magnificent demonstration of free men working to a common purpose. And all this with little or no encouragement from Washington authorities.

Know America first

MAYBE you saw it, too—the "My Day" account of Queen Wilhelmina's visit.

Mrs. Roosevelt had been telling the President of "the need for some sort of character loan which could be made to people without any security except their reputation." Overhearing this remark, the Queen interrupted:

That is done by state banks in Holland. It was one of my brain children after the last war.

There the incident in "My Day" ended. It left the impression that Holland is more advanced than America—that we, too, need state banks to make personal loans.

But, as the editor of *American Banker* points out, there's where the First Lady missed a good chance to put in a proud word for her country instead of being sorry for it. Because it was more than 30 years ago that Arthur J. Morris introduced the Morris Plan unsecured or co-signed loan for wage and salary earners. And American country bankers made small loans to be repaid in install-



CITATION

To The Office Workers Of America . . .

As contributors to the war effort, they merit your praise and recognition.

Consider what our country has gained through the spirit and ability of these men and women.

No other country has produced office workers of such alertness, ambition and progressiveness.

Nowhere else have such workers been so willing to improve their methods, so consistently eager to replace the old and slow with the new and quick.

This has resulted in the creation of a huge office machinery industry of which Underwood Elliott Fisher is proud to be a part.

Because this industry exists, our Army and Navy possess a supply of typewriters and other office machines unmatched by any of the enemy.

Because this industry exists, our

country possesses a group of manufacturing plants—*built* to supply the world's greatest needs for office machines—*now turning out* large quantities of important war materials.

Day after day we read of deserved awards to *factory* workers . . . here is our tribute to America's *office* workers.

And here is our promise to those workers, several million of them our valued customers.

No matter what the difficulties, our maintenance service will continue undiminished from coast to coast.

We shall continue to provide spare parts . . . as well as a complete line of carbon paper and ribbons unsurpassed in quality, for every make of office machine.

And we shall continue to devise and suggest methods for *conserving* their typewriters, adding and accounting machines and for *operating* these machines with greater efficiency.

Underwood Elliott Fisher

HELPS SPEED THE NATION'S VICTORY

Underwood Elliott Fisher Company, One Park Ave., New York, N. Y.

ments as long as 50 years ago. What the State did in Holland was to follow private banking practice in this country.

Too many of us in recent years have felt so sorry for ourselves, and with ecstasy promoted some foreignism that was simply an old-world government steal from American private enterprise.

Not so Q.E.D.

A WOMAN columnist who enjoys quite a vogue among several million newspaper readers argues that a nation that can spend one hundred billion dollars for war in 1943 "will be able to invest one hundred billion dollars in instruments of reconstruction in 1945." By the same token, we suppose, the lady would say that if she had cash and credit of \$2,000 and blew it all in one year on fireworks, this would prove that she had another \$2,000 to put into productive effort after the show is over. The Haywire School of Economics is still doing business at the same old stand.

Government paper work

THIS is the Memo that Jack wrote.

This is the fifth assistant clerk who checked the memo that Jack wrote.

These are the other quartette of clerks who checked the check of the fifth assistant clerk who checked the memo that Jack wrote.

This is the Subdivision Chief who initialed the checks of the other quartette of clerks who checked the check of the fifth assistant clerk who checked the memo that Jack wrote.

This is the third assisant secretary of the Bureau Commissioner who initialed the initials of the chief of the subdivision who initialed the checks of the quartette of deputy clerks who checked the check of the fifth assistant clerk who checked the memo that Jack wrote.

—and if you can't follow this any further you'd better not take a job in Washington where this is only a start on paper work involved in the transmission through the "regular channels" of the memo—which didn't amount to a damn in the first place—that Jack wrote.

—BERTON BRALEY

Good book on war effort

OUR good friend and associate, Herbert Corey, who writes the bright feature "Washington and Your Business" in this magazine, has written himself a book. The title is, "The Army Means Business," and when Mr. Corey gathered his material and sat himself down at the typewriter, he meant business, too, as a reading of the book will quickly convince the reader. Mr. Corey was a war correspondent in the unpleasantness of 25 years ago, and so far in this war has specialized on the Army and Navy to the point where he is perilously close to being an expert. If you don't believe it, we invite your attention to



Whipple Jacobs, president, handing first war bond dividend to Belden stockholder, Mrs. Wm. R. Kerr, Jr.



The Belden War Bond-or-Cash Dividend Plan

nets 10.6% subscription for war bonds on first offer to Belden stockholders

THE directors of Belden Manufacturing Company, inspired by the success of payroll allotment plans in the sale of war bonds, voted at their August 3, 1942, meeting to offer Belden stockholders an option to accept all or part of the current dividend in war bonds or stamps. This offer was prompted by a twofold desire:—

1st—To give additional aid to the campaign of diverting income . . . dividends as well as payrolls . . . to the purchase of war bonds;

2nd—To stimulate free enterprise in war bond buying and thereby perhaps make unnecessary the use of compulsory methods in financing the war.

To facilitate this action, Belden directors set the dividend at 37½¢ a share, a figure which gave stockholders of every fifty share unit a return exactly equal to the purchase price of a \$25.00 (maturity value) bond. The offer indicated that unless the bond subscription blank, enclosed with the dividend notice, was returned within twenty-one days the dividend would be paid automatically in cash.

Secretary of the Treasury Henry Morgenthau, Jr. made the following comment on the Belden Plan—"The salary allotment plan has met with widespread acceptance and we hope that the new method for reaching stockholder income meets with equally favorable public approval."

Upon hearing of the action taken by Belden directors to promote the sale of war bonds to stockholders, W. P. Witherow, president of the National Association of Manufacturers, made the following statement:

"I am highly enthusiastic about the patriotic and economically sound approach you have taken in making your dividend payments payable in the form of war bonds. I am hopeful that many other companies will follow in your footsteps."

Sterling Morton, president of the Illinois Manufacturers' Association and member of the Illinois War Savings Staff, said, "Congratulations to the Belden Manufacturing Company for its patriotic and enterprising action in taking the lead in offering to pay dividends in war bonds and stamps. I shall bring it to the attention of all members of the association."

Belden stockholders subscribed for a total of 10.6 per cent of the dividend payment in war bonds and stamps. Some stockholders remitted additional cash to permit them to purchase war bonds of greater value than the amount of their dividends. The patriotic spirit with which Belden stockholders responded to the Plan is indicated not only by their substantial subscription for war bonds but also by their many written comments, one of which follows in part: "I think this is a splendid idea! Please continue to give us this privilege."

The results of the Belden War Bond-or-Cash Dividend Plan demonstrate that, if given convenient facilities for purchasing war bonds, corporation stockholders respond in the same patriotic manner as corporation employees to the voluntary allotment of income for bond purchases. The Belden Plan therefore provides a practical and effective means of establishing a closer community of interest between stockholders and employees.

Treasury department officials have estimated that similar plans, if generally adopted by corporation directors, could increase War Bond sales by as much as \$500,000,000 a year. Full details concerning the operation of the Belden War Bond-or-Cash Dividend Plan will be forwarded on request.

Whipple Jacobs

PRESIDENT

BELDEN MANUFACTURING COMPANY ☆ CHICAGO



How Commercial Credit Financing is Helping War-Time Industry

FINANCING WAR CONTRACTS . . . or financing the production of any kind of commodity under war conditions . . . presents serious difficulties. Generally, it calls for considerably more working capital than many concerns are accustomed to employ.

We recently solved difficult situations for two packing houses with large Government contracts for meat-products for our fighting forces. When the financing connections of these companies proved inadequate or too restrictive, we put more than \$6,700,000 additional cash at their disposal to maintain inventories, support production and meet Federal tax payments.

MILLIONS FOR WAR-PRODUCTION FINANCING

We are prepared to work out financing plans to meet the special requirements of war-time financing in any line of industry.

Our capital and surplus of more than \$65,000,000 is available to do the job. In the past year, we supplied to our customers more than a billion dollars of cash to meet their working capital requirements. Among these are concerns engaged in such varied lines as aircraft and accessories, food products, radio, lumber, leather, paper, textiles, alcohol, machinery, metal goods, wood, plastics, electrical equipment and others.

Our service is prompt, our charges reasonable and *no interference or restriction* is placed on management. If you need cash to purchase materials, meet payrolls, buy equipment or pay taxes, wire or write for information. Address Dept. 1407.

Commercial Credit Company **Baltimore**

Subsidiaries: New York Chicago San Francisco Los Angeles Portland, Ore.

CAPITAL AND SURPLUS MORE THAN \$65,000,000

a special article by Mr. Corey in this issue entitled "World's Toughest Fighting Man."

Mr. Corey suggests the glory and fearfulness of our war effort, when he says simply,

One hundred and thirty-two million people have turned around and are facing toward war. Interesting—and appalling.

The double threat of waste

TO OUR remarks on needless waste in construction of government plants in the September issue, reader Ralph E. Spalding of Jacksonville, Fla., adds an important corollary.

When a country at war wastes public funds it is generally at the same time wasting manpower, says Mr. Spalding. Because it takes men and time to produce materials that are thrown away on unessential flummery. Up to a certain point money losses can be made good in years to come, but losses in man hours are truly over the dam for good. In the use of time, men and nations alike must pay as they go. And the well of manpower is not unlimited.

Figures don't lie—often

THE ALERT Harvey Campbell, who shoots off editorial sparks every week in "The Detrouiter," says he is entertained by statistical stories proving that strikes are few, comparatively, since Pearl Harbor. Mr. Campbell refuses to be convinced until he sees comparative figures from the Nazis, Japs and Fascists, and he wants to know how American labor leaders would like to head a "jurisdictional award" strike in Tokio or Berlin.

Failure of the statistics to impress Mr. Campbell reminds us of Senator Tydings' story about the Pullman porter who was asked how much his average tip was.

"A dollar is average," replied the porter, "but very few gentlemen give me the average."

Explaining the billions

FROM the same source we learn of a sardonic old fellow who refuses to be flabbergasted by the constant outpouring of billions of dollars in governmental appropriations. Says it reminds him of the old days when he came upon a drunk stuffing a dollar bill down a crack in the wooden sidewalk. He asked the inebriate to explain why, and the answer was: "I lost a dime down there and I'm trying to make it worthwhile to pull up the board."

Another "Right" on the skids

ARTICLE VI of the United States Constitution says that "in all crim-

inal prosecutions, the accused shall enjoy the right to a speedy and public trial." Many Americans can remember clear back to when this was more than a phrase. We dusted it off and read it again the other day after hearing that Attorney General Biddle had obtained indictments against E. I. du Pont de Nemours & Company and Rohm and Haas, as well as officials of each company, for alleged conspiracy to control manufacture and sale of plastics. The same announcement said:

Mr. Biddle announced that trial of both cases would be postponed until after the war at the request of the secretaries of War and Navy. A previous indictment, in which the du Pont Company was charged with monopolizing the manufacture and sale of dyestuffs, also has been postponed for the duration.

Of course, the War and Navy departments, recognizing the importance of war work being done by the indicted companies, want no interruption in that work while Mr. Biddle



and Mr. Arnold drag these cases along through the courts. So the Department of Justice goes merrily along trying the cases in the newspapers and prejudicing public opinion, while the indicted companies and executives must bear it and try to grin, unable to clear themselves in the courts and enduring the libels of every crack-pot reformer and business-baiter who comes along. One rather widely-read commentator recently referred to companies indicted at the behest of the Department of Justice as "criminal industry." One popular news-magazine labelled its "news account" of a similar charge (later withdrawn) with the "newsy" heading, "Contribution to Defeat."

The war industries so involved cannot fight back. So they take it on the chin while government morale officers beseech management and labor to perform more and more miracles of production, and the public grows more than ever bewildered at a Government which pins a Navy E on a company in the morning and kicks it in the pants in the afternoon.

Reminds us of a lawyer friend who takes his young son on his knee occasionally and tells him a bedtime story which begins: "Once upon a time there was a Constitution..."

The penalty of merit

AT FIRST blush, Thurman Arnold's monopoly suit against Associated Press appears to be the strangest paradox of his speckled career as a trust buster.

In substance the Assistant Attorney General alleges that A.P. has done such a good job it stands "in the forefront in the public estimation and esteem." Therefore, its service is necessary to the survival of any newspaper. Hence it is unfair discrimination in violation of the Sherman Act when that service is not obtainable by a particular paper.

If these contentions were true, and if A.P. service were made available to every newspaper, as the Government demands, then A.P. would indeed become a monopoly.

But let's give Mr. Arnold credit at least for consistency. His position in this case is basically the same as his stand of a few years ago on advertising. At that time he said that a firm which makes a good product and earns a lot of money from it can then advertise in a big way to other potential consumers of the product, and in so doing would take unfair advantage of its smaller competitors.

Consistent in fallacy, yes. But he was wrong then and he's wrong now.

This item might be headed "Build a Better Mouse Trap—and Mr. Arnold Will Beat a Path to Your Door."

Another possible title comes to mind, "Maybe it's Only Wyoming Loco Weed."

Not in the communiques

O.P.A.'s Oklahoma price administrator Hayes has ruled that March prices must be posted on all bootleg liquor sold in illegal establishments.

BAND leader Don Mario was fined \$500 by a local of the American Federation of Musicians because he stood up with a crowd at a Fourth of July rally in a Providence park and sang the national anthem.

ONE hundred men in a New Jersey airplane factory struck because the milk delivery to a vending machine in the plant was late.

MANY factory workers are said not to be wearing the "E" emblems awarded them, because the emblems bear no "union made" stamp. This oversight by the Navy is being corrected.

Landmarks of business progress



IN 1614 John Napier, Scottish nobleman, devised the first mechanical means of calculation... a system of numbered rods, called "Napier's Bones", permitting the solution of multiplication by addition.

Today

Among modern calculators Marchant sets new standards of speed and accuracy with

20 POINTS OF SUPERIORITY



Point 13

Automatic

Simultaneous Multiplication

Time saved on every multiplication is real economy in the course of a day... in the course of a job.

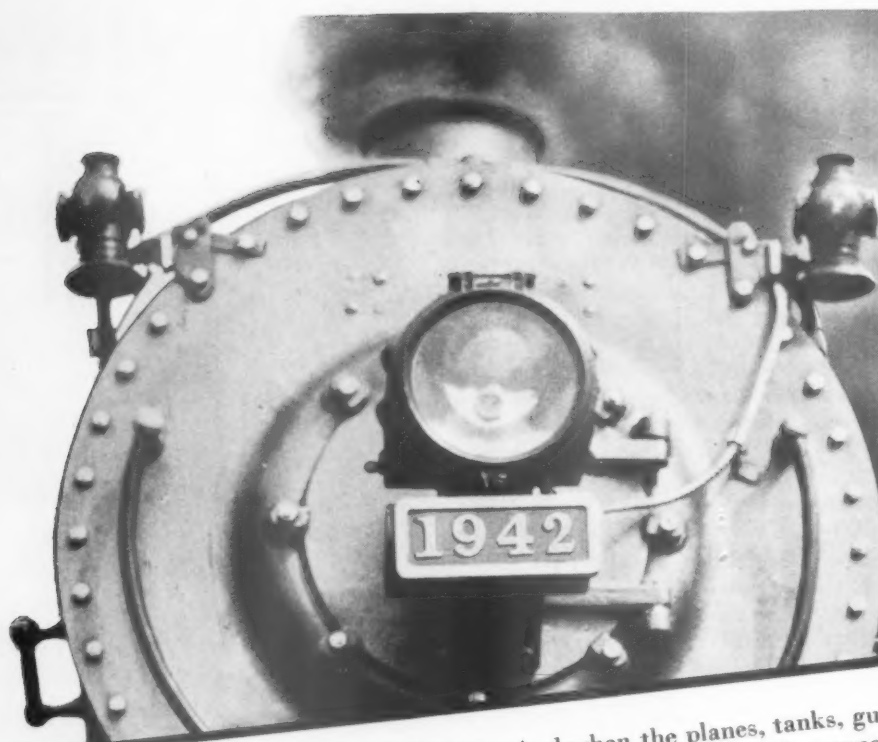
Marchant saves that time. For example, 9358×3456 takes only $3\frac{3}{4}$ seconds, including all set-ups and operations. Even the Marchant of 10 years ago, fast for its day, needed $9\frac{1}{2}$ seconds for the same problem.

The secret? Marchant's Automatic "Simultaneous" Multiplication, called "simultaneous" because the answer is formed during the time the multiplier is being entered and not afterward.

Ask the Marchant Man today to explain the advantages of the other 19 points.



Marchant Calculating Machine Company
Home Office: Oakland, California, U. S. A.
SALES AGENCIES AND MANUFACTURER'S
SERVICE STATIONS GIVE SERVICE EVERYWHERE



ENGINE OF WAR

IT'S strange to think of the familiar, friendly locomotive as a weapon of war.

But right now that's what it is.

For locomotives really make possible all the other weapons of war we must have.

They haul the ore and fuel that steel mills require.

They take the steel to shipyards on all three coasts and on the lakes.

They bring the engines, wing assemblies and other parts to the fabulous plants where the fighting planes are made.

They bring the quantities of chemicals, coal and oil, everything that three-shift war plants demand.

And when the planes, tanks, guns and food are ready, locomotives speed them on their way to the boys at the front.

Today the locomotives of the American railroads are doing a job which, a year or so ago, would have been called impossible. And it is a job so big that only the railroads could undertake it.

It's a job that means sending off a loaded freight train every five seconds of the day and night—that means hauling a million and a quarter tons of freight a mile every minute—and, by the way, doing it for less than one cent a ton per mile.

To do it, the railroads are exacting the greatest service from every available piece of equipment. For other war requirements may prevent them from getting the additional cars and engines the job justifies.

But, with the equipment on hand and what can be obtained, these engines of war will prove themselves mighty weapons in the drive to Victory.

ASSOCIATION OF
AMERICAN



RAILROADS
WASHINGTON, D. C.

We Must Re-Discover America

FROM one field of industry, chemistry, comes this month a hopeful and inspiring picture of America's future.

It is contingent upon an "if," the survival of private enterprise.

Dr. Charles M. A. Stine of E. I. du Pont de Nemours and Company, in collaboration with the nation's industrial chemists, presents the bright new horizons which war's end can open to each man and woman:

Aluminum, magnesium and light steels available in undreamed of quantities; enough aluminum already being produced in a single year to build as many passenger cars as operate on all American railroads, or seven times as much as was produced in 1939. Twice as much magnesium being precipitated from sea water in a single year as our entire aluminum output in 1939.

Your shiny 1942 automobile, already 20 years out of date, supplanted by a light new car with sealed cooling system, with power output per cubic inch of displacement quadrupled, with fuels yielding 50 miles to the gallon. All existing motors already *passé*.

An aviation industry, now geared to produce twice as many planes in a single year as in all the 37 years since Kitty Hawk, giving us aerial box-cars that can lug 20 tons of pay freight to Europe and back non-stop. And air trains of gliders, dropping off "cars" here, picking them up there.

Glass that is unbreakable and can float; wood unburnable; laminations of plastics and wood to compete with steel; shoes without leather; window screens without wire; machinery without steel.

High pressure synthesis of ammonia is developing new producing capacity rated as comparable to discovery of a sixth continent.

Food available in greater quantity with easier effort, and in quality possessing the power to prolong life.

This is only a sketch of things to come, if—

War did not create these ideas. Most of them were in the industrial laboratories during the '30's. War simply accelerated the development which was held back in the '30's because we, the people, followed political leaders who attacked the rewards of incentive, who decried risk capital, who set up an artificial standard to take the place of individual reward for individual merit, and thus chilled and deadened and stultified the American free enterprise system.

Here are two facts: For 30 years, from 1900 to 1930, we, the people, risked three billions a year in developing new things, and another three billions in buying new things, roughly six billions in all. But in the following decade we expended those six billions each year through the Government, through Washington agencies in non-productive enterprises. From management's hands our savings went into political hands.

No political organization since the world began ever developed a great industry. Even water-works and the postoffice were developed by the risks and energies of individuals pooling their resources under private management.

The future's possibilities are limitless if we but remember that. If we keep in mind that there is one freedom necessary to the consummation devoutly to be wished, the freedom of enterprise, the encouragement of risk-taking, the applause and commendation for those who come through successfully, rather than envy and vituperation against the measure of their success.

Only if we are willing to pay this price can the future give up its treasures to the common man, and thus usher in the Golden Age which is our heritage; only if—

Meree Thorne



*Lockheeds
GET INTO THE AIR
Quicker!*

**BECAUSE OF
TRUCK-
TRAILERS**

★ Lockheed fighters and bombers, the death-dealing Lightnings and Hudsons, got into the air quicker on all of the fronts where they've lashed and blasted the enemy . . . because of Truck-Trailers!

That's because production is speeded at the big Lockheed plants on the West Coast by the faster inter-plant handling of material by Trailers. Minutes and hours gained here and there in production mean precious days and weeks gained in the delivery of these war planes.

Lockheed's fleet of Fruehauf Trailers, which started with three units in 1939, performs many tasks, most of which could not be handled in any other way.

FOR EXAMPLE—

Material must move swiftly and regularly, day and night, between the No. 1 and 2 plants, 19 miles apart over a traffic-congested route. Trailers, hauling about 8,000 pounds each and working on a "shuttle system", make nine round-trips per day and help keep the assembly lines fed. "Shuttle system" means that one truck-tractor handles three Trailers . . .

truck and driver are always busy pulling one Trailer while the others are being loaded and unloaded at the two plants.

OTHER ADVANTAGES

Still more precious time is saved by the Fruehauf automatic coupling . . . the driver couples the Trailer to his truck, or uncouples it, without leaving his cab.

Maneuverable? Truck-Trailers worm through lanes inside the plant where trucks big enough to carry such loads couldn't move.

Versatile? They carry a multitude of items . . . wings, propellers, engines, patterns, wing jigs, etc.

Economical? There has been only nominal maintenance.

World's Largest Builders of Truck-Trailers
FRUEHAUF TRAILER COMPANY, DETROIT
Sales and Service in Principal Cities

LOCKHEED'S TRUCK- TRAILERS CONSERVE RUBBER, STEEL, FUEL, MOTOR POWER

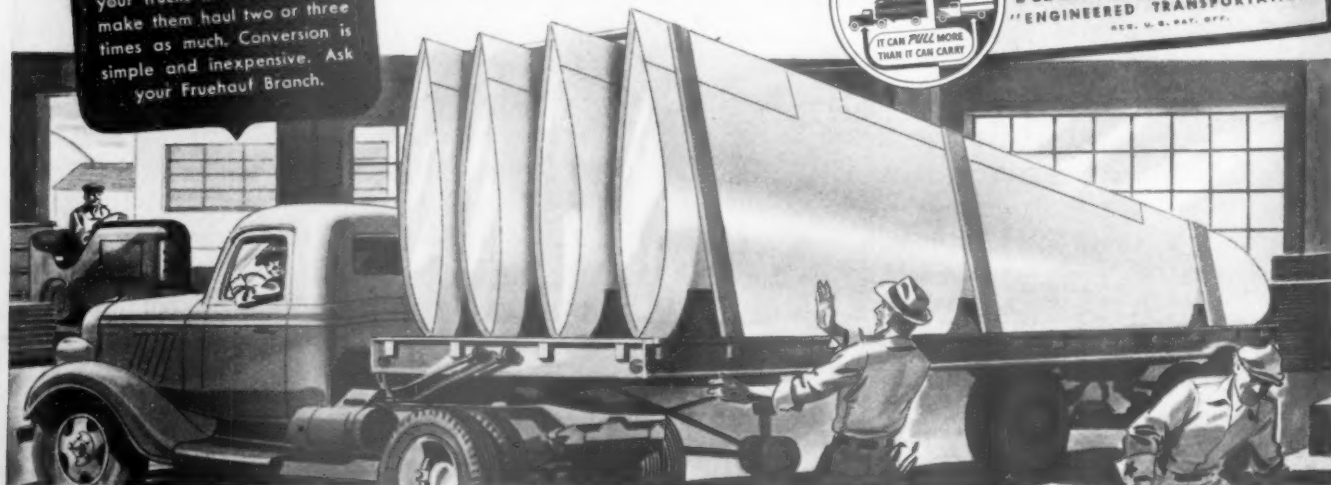
- Since a truck, pulling a Trailer, can haul far more than it is designed to carry, fewer trucks are needed.
- A Truck-and-Trailer combination uses about 16% less weight of tires and 25% less steel and other metals than do the 2 trucks required to carry the same payload.
- A truck, with a Trailer, uses far less fuel than the one large truck or several small trucks it replaces.

Convert

your trucks into tractors and make them haul two or three times as much. Conversion is simple and inexpensive. Ask your Fruehauf Branch.



FRUEHAUF Trailers
"ENGINEERED TRANSPORTATION"
REG. U. S. PAT. OFF.



TRUCK-TRAILER TRANSPORT IS DOING AN ESSENTIAL JOB FOR ALL AMERICA

The Combat Teams of Industry "FALL IN"

By **FRED De ARMOND**

IN ACCOUNTING for the German defeat in 1918, Field Marshal Von Hindenburg wrote of America's part in that debacle:

"Her brilliant, if pitiless, war industry had entered the service of patriotism and had not failed it."

Today that same "brilliant, pitiless" war machine, with its power vastly stepped up, is in resistless motion again. It is something far bigger than the Army and Navy. It is the concentrated might of America.

This machine was not built to order for the oc-

casion. In skeleton form it stood ready to be summoned when needed. Organized industry provided the skeleton. Every group had its trade association, a nucleus held together by the strong attraction of vocational community of interest. These are the wheels and cogs of America's great war industry machine.

In the past poets have sung the glory of the citizen soldier who left his plow in the field and shouldered his musket. Future chroniclers may find similar inspiration in 1942's astonishing epic of industrial mobilization.

THE PEACE of a Washington Sunday afternoon was suddenly disturbed by a peremptory jangling of telephone bells. General Marshall was at home eating dinner when his call came. Answering, he heard the for once excited voice of a staff officer:

"Japanese planes are bombing Pearl Harbor!"

The General directed that all the key officers of the war machine be phoned at once.

That's where the story of American trade associations and the war begins.

One of the most important of those key men is a civilian—not even a War Department employee. He is Arthur Gass, boss of the Military Transportation Office, a division of the Association of American Railroads.

Mr. Gass was writing a speech when he heard the news.

"I'm coming." He pushed his notes aside and grabbed his hat. For four days and nights, snatching only a few short naps, he was almost continuously at work, sending out to railroads and regional railroad associations orders to round up cars, clear tracks, submit routings and stand by to move men and supplies.

The smooth movement of 600,000 fighting men in the next seven weeks, plus five carloads of freight for every carload of men, was no sudden improvisation. It represented planning by the railroads through their central associa-

tion in Washington—the planning that goes back to the last war. In those tumultuous days in 1917-18 railroad men and military men were learning. They are not making the same mistakes they made then. Between them they are moving men and goods with well-oiled dispatch. The Association is "geared to war" because it was planned that way 25 years ago. There was no trial and error in the routine by which the Military Transportation Office collaborated with the Army. So close is the coordination that, in the words of the deputy chief of the Army's Traffic Control Division:

Although the Military Transportation Section of the Association of American Railroads is a commercial railroad organization, staffed and financed by the railroads, it works so closely with us that for all practical purposes it is a function of the War Department.

After the Military Transportation Office has obtained a routing and assembled cars and locomotives at the loading point for a troop movement, its work has merely begun. The Washington office is notified when each train departs, when it arrives at each junction point and at its final destination. Moving an infantry division with all equipment requires 65 trains with approximately 1,350 cars. At the end of each division new locomotives and train crews must be ready. Of the 6,250,000 soldier passengers carried



Organized advertising contributed the planning and technique that made the salvage campaigns click

in organized troop movements in this country by the end of July, practically all who made overnight journeys rode in Pullman berths.

In Washington sits a Board of Economic Warfare, staffed with many savants, to plan and organize the nation's economic resources for war. They are the overhead, but the real economic planners are the leaders of organized business. Last month NATION'S BUSINESS recorded what business community groups are doing for total war. Chambers of commerce with a geographical community of interest are supplemented by trade associations with an industry or trade community of interest. This is an account of the trade group and functional association contribution.

Most of these associations that had not already geared for war have done so since Pearl Harbor. The way they've stripped down business-as-usual functions that are dispensable in a war economy is an excellent example—one that government bureaus might well emulate. Many purely industry promotion activities have been suspended.

This was the unity of purpose voiced by W. J. Donald, managing director of National Electrical Manufacturers Association, when he said recently:

The war production program asks American industry in general, and electrical manufacturers in particular, to do the impossible—and they are doing it to an amazing degree.

One result of war likely to be reflected in a long-term trend is that of bringing associations and the federal Government closer together.

So many major decisions are made in Washington now that an efficient national association is first of all one which knows its way around the Capital. On the other hand, government is so palpably dependent on the associations to effectuate its programs that the partnership is 50-50. Business representatives take the position that even unreasonable requests deserve patient consideration when made in

furtherance of that cause to which the whole nation is now devoted.

Those who prosecute total war are forced, as in no previous emergency, to recognize the place of management. Administrators, technicians, generals and admirals find themselves helpless without the managers. These are times when a trade association executive cannot wait to call his board together before making a decision. He must act and take the consequences of "sticking his neck out." Today there is no sin like inaction.

When the executive committee of Associated General Contractors met in Washington the very day war was declared on Japan, it gave the headquarters officers and staff full authority to reshape their program in the way that best fitted war conditions, and to drop all activities that might hinder war work.

"This has been called a war of the assembly line, but it is also a war of management," says Alvin E. Dodd, American Management Association president. He adds:

It is the skill and creativeness of management that give us the instruments of production . . . that make tank plants spring from corn fields and machine guns come from factories that once made typewriters. It is management that adopts machines for new products, trains workers for new skills, and develops intricate subcontracting systems.

Individual management had to be given centralized direction to make all business and industry work as one unit. That is the task of the trade associations. Their job in a nation at war is as broad as economic life itself. They are performing nearly every chore imaginable. But generally their efforts are of about seven types:

1. Organizing for war production.
2. Conservation of vital materials and services.
3. Fact-finding and relaying.
4. Mobilizing and training manpower.
5. Raising money for war.
6. Public education.
7. Keeping the home fires burning.

1 ★ Hercules Flexes His Biceps

Industries teamed up, pooled their resources and did jobs that as aggregations of individual firms they could never have swung. Competition was adjourned, old policies put on ice and all machinery geared to war. "Symbol 61 is on the way"

ON THE last day of December, 1941, the automotive industry adjourned competition for the duration. About a thousand representatives of passenger car, truck, bus, trailer, parts and equipment and tool and dye makers got together and organized one big association, the Automotive Council for War Production, which should speak and act for all. A resolution adopted by the new body characteristically expresses the aim of all industry:

We pledge, on behalf of the entire automotive industry, not only a cooperative spirit in the common task, but complete interchange of mass production information, time-saving techniques, product improvements, tooling short-cuts and developments which the individual concerns have now effected or will bring about in doing their portion of the work.

The shock of bombs on Pearl Harbor had found the industry with \$4,000,000,000 in orders for what we were then calling "defense" materials. On Monday, December 8—the biggest day in long distance telephone traffic in all history—so many more assignments went out from Army and Navy headquarters that this "back log" was almost immediately doubled. Shortly it had been trebled.

Kibitzers harassed the industry with recrimination and gratuitous advice as to how it could convert to war production at the snap of a finger. The auto men were practical

about it. They knew that, although it would be wonderful to say to a machine: "Stop making that Plymouth crankcase and get going on this aviation crankcase," they are not living in fairyland.

Having pooled their resources through the Automotive Council, they began the long-proved—and, if you will, prosaic—process of organization.

Those men organized to bring surplus machine tools lying in disuse to where they could be used: A former spark plug plant needed screw machines. A Massachusetts company had some. Another company needed large planers for its aircraft work. The Council found them—of all places—in an Indiana limestone quarry.

The Council's Machine Tool and Equipment Service listed 250,000 pieces of production equipment and cross-indexed all machinery in 450 plants owned by 260 companies. Matching of tool and die needs with tooling availabilities helped hundreds of manufacturers to change over from peace to war. A war contractor who needed a certain type of press didn't have to advertise or canvass other

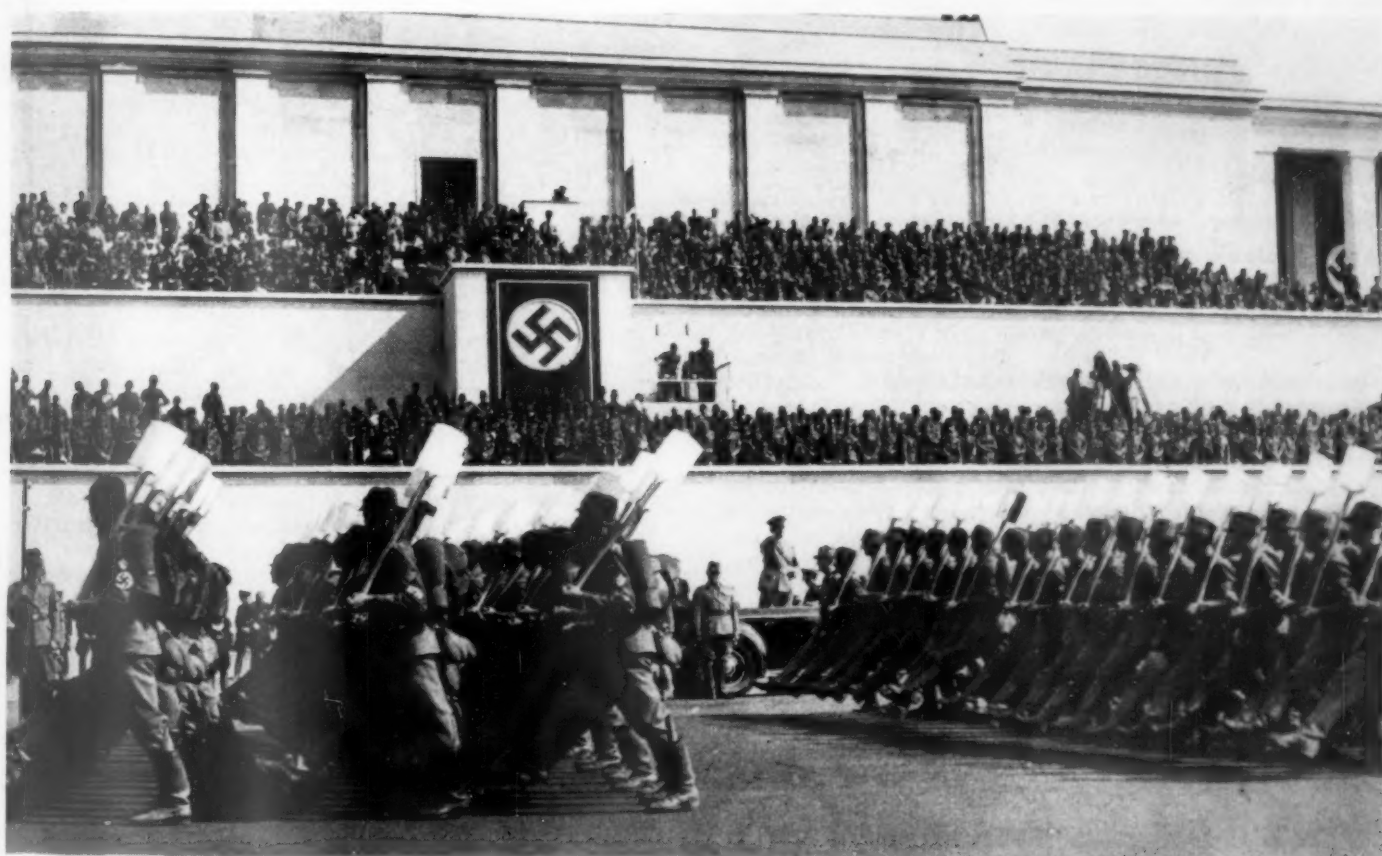
peak peace-time year of the automotive industry. And the pace goes on increasing.

This same pattern for converting industry quickly from peace to war is seen throughout the whole industrial fabric.

One of the first problems was how to spread war orders among as many firms as possible. Which of them were competent to produce according to specifications? What was their capacity? National Electrical Contractors Association surveyed 6,000 electrical contractors, filed with War and Navy departments the performance records of 750 qualified firms.

At the request of the War Department, National Federation of Textiles brought 100 representatives of silk weavers to New York to meet contracting officials. Contracts were placed then and there for practically all available silk supplies and an agreement was reached that the weavers would begin experimenting with Nylon for parachutes.

Because the domestic washer and ironer industry has a strong and forceful association, the O.P.M., predecessor of W.P.B., could award it a joint industry contract of



"Instead of trying to get Hitler's results by imitating Hitler's methods, we must surpass his results by avoiding his methods."—Paul G. Hoffman, Studebaker president

manufacturers to find it. He told the Council. Usually his wants were satisfied quickly.

The auto men organized to help prime contractors find subcontractors. Also to help the smaller concerns get subcontracts that would put them into war production.

They organized to make specialized skills and techniques available to all. What one learned he threw into the pool for all to use. There are no trade secrets in war production.

So well had the Automotive Council organized that, by August, the industry was delivering to the Army and Navy \$14,500,000 worth of armament a day. That was at a rate of about \$5,400,000,000 a year, 32 per cent ahead of the average rate of production for non-military items in 1941,

\$12,900,000 for gun mounts, said to have been the first such order.

Seven firms in Denver jointly took a contract to build a number of small ships for the Navy. The parts were fabricated, shipped on freight cars to San Francisco. There they were put together and the ships launched. None of the small plants alone could have handled such a job. Through the central agency of the American Institute of Steel Construction, many such groups have been brought together and conversion to all-out war production furthered as could not be done individually, nor by Government departments alone.

The canvas goods manufacturers, working through or



EWING GALLOWAY

"Block shipping," or oil tanker express trains, have multiplied petroleum shipments from west to east 70 times

encouraged by their national association, get together in groups and swing large war contracts. Each manufacturer reports on his capacity and is allotted a share of the order. Financing is arranged centrally through banks.

Cotton Textile Institute has gone a step farther for its members by trying to induce a revision of the clause in government contracts which grants protection or reimbursement on finished goods and raw materials in process when the war ends. At present this clause applies only to the prime contractor. The sub-contractor must look to his principal for similar protection. The Institute would like to see the Government assume the responsibility for extending that protection.

American Finance Conference, an association of discount companies, undertook to meet war contractors' financial needs. Capital released by government restraint on installment credit has been diverted into the operation of egg-drying plants, parachute factories and other forms of war production.

Trade organizations have shown a flexibility never demanded of them before. Established policies were put on ice temporarily, new goals set, objectives changed.

Copper and Brass Research Association was born about the close of the last war, to find new uses and develop expanded markets for a billion pounds of copper that had been mined for war uses before the Armistice. Now that there is not enough copper to go around, even for military purposes, the Association has not closed shop. It is assisting small plants that once used copper and brass to get war orders and keep their employees at work. Meanwhile, research looking to the future of copper continues. In time of shortages this association prepares for surpluses.

Back in 1941 the evaporated milk industry was asked to step up its production immediately by about 40 per cent for lend-lease shipment. Committees of the Evaporated Milk Association took over and production was soon increased. After we entered the war, ocean transport became so hazardous that the Department of Agriculture asked

the industry to "turn off the spigot." Now it is trying to reduce production with as little disruption to the milk producers' market as possible.

If Vice President Wallace's dream of a pint of milk a day for every child on the globe is interpreted literally, the next order may be to step up evaporated milk production by several hundred per cent.

The seven labors of Hercules long stood as the final superlative in human endeavor. But they were sport compared to some of the jobs that organized industries have undertaken to outmatch the Axis.

The railroads, for instance, in addition to handling troops and supplies, soon received another burden.

U-boats were sinking our ships.

For the first time in years the railroads were called upon to bring Pacific Coast lumber and the bulk of Pacific Coast canned goods to the East; Maine potatoes had to be freighted south and Florida citrus fruits north by rail. Most of the necessary importations of tropical fruits and Caribbean sugar had to be hauled from Gulf and South Atlantic ports all the way to the Northeast.

But the biggest item was oil. Ninety per cent of East Coast oil had been shipped from Gulf and Pacific Coast ports by tanker; now the bulk of it goes overland.

The Association of American Railroads organized a Tank Car Section and evolved the "block shipping" system. Previously short strings of tankers had been mixed with other freight, switched off at various points along the line. Now, whole "express" trains of 60 cars or more are routed straight through from the oil fields or pipe line terminals to refinery towns, industrial cities and central distributing points in the East.

A teletype message reaches the association office in Washington: "Symbol 61 is on its way."

That's just one of 66 routings. It refers to a block shipment of oil from Texas City, Texas, to White River Junction, Vt., across part of Canada, a distance of 2,412 miles, over five railroad systems. It will reach its destination in about five days.

Several agencies cooperate to keep this system rolling: the tank car companies, the petroleum industry, the O.D.T., the Petroleum Coordinator, and of course, the railroad companies. By this system, railroad oil shipments have been multiplied 70 times. On its continued operation depends the point at which eastern oil burning householders can set their thermostats this winter.

In attempting to do in months what the Germans took years to accomplish, we have worked without the brutal efficiency that any autocrat wields. The two systems are on trial. It is too early to boast that ours is superior in war, as it has proved itself in peace, but the record to date is a promise that should look foreboding to those on the Axis side of the fence. It is assurance that we are right in sticking to our own style and following the counsel offered by Paul G. Hoffman, Studebaker Corporation president, to the Automotive Council for War Production:

Instead of trying to get Hitler's results by imitating Hitler's methods, we must surpass his results by avoiding his methods.

2 ★ Stretching Our Resources

Organized business had to sell conservation within its own ranks, but even more to set an example that government should follow. Every trade found leaking spigots that in normal times they could not afford time to stop

CONSERVATION, like charity, begins at home.

That goes for government as well as business and the individual, as United Typothetae, the organized printing

NATION'S BUSINESS for October, 1942

industry of the nation, recently demonstrated conclusively.

Shortly after the war began, Army officers decided to set up a large-scale printing and binding plant near Wright Field, Dayton, O., to produce pamphlets, instruction manuals, etc. Equipment was actually ordered and bids asked for similar plants in each of the Army's other eight corps areas.

A consultant at W.P.B., noticing the first order, wondered if the Government really had to have eight big printing plants. He asked United Typothetae for information. Acting quickly, U. T. sent 2,700 air mail letters to leading printers. Within a week, they received more than 1,100 replies showing that the printing industry could handle twice its existing volume.

Result: the Army had its pamphlets done without tying up men and materials in the production of more than a million dollars' worth of new equipment.

Producers' Council, trade body of the building material manufacturers, also had to do an educational job with government agencies as well as private builders. Its brochure, "The Conservation of Critical Materials in Construction," compiled in collaboration with the American Institute of Architects, is a manual on substitutes for the guidance of all who design war construction. W.P.B. itself hands the booklet out to construction men seeking advice on what they can and cannot use.

"If copper is needed in the building of a plant that will use copper to manufacture shells, is the plant or the shells more essential?" asks Director Follin of the Council. He supplies his own answer:

"It is likely a substitute can more easily be found for the building than for the shells."

The pressure of priorities gave trade associations the task of winning members' acceptance of these restrictions. They meant a readjustment, a recession from quality standards achieved after long years of trial and error. Yet the actual adjustment in many instances was not as hard as it seemed.

Chlorine is an example. It is a vital item in war for sterilization and sanitation. The Government took a large

part of the supply. Paper manufacturers saw themselves in a serious predicament, until a committee of the American Paper and Pulp Association lent a hand. Soon, by judicious substitution and careful use, makers were producing more paper than ever before, although their chlorine quota was cut to 70 per cent. Much of the paper is not so "bright" but it will serve.

Many laundry operators, too, felt that, without the usual amount of chlorine, they couldn't produce the proper whiteness in linens. Soon—their quota cut in half—they found that close adherence to the recommendations of the American Institute of Laundering meant just as good or better quality with less bleaching.

War, for all its tragedy and destruction, does stimulate efficiency and economy:

When imports from the Orient stopped, the Cotton Textile Institute and the Textile Bag Manufacturers Association developed a cotton bag to supplant burlap in handling agricultural produce. Now the Textile Institute is seeking outlets for large quantities of waste in textile mills. Experiments are under way to make low cost twine for tying bunches of green vegetables. The Government has been requested to change mattress specifications in order that cotton waste may be used for stuffing instead of cotton linters, now needed for munitions making.

National Electrical Contractors Association sponsored a simplified practice conference at which electrical manufacturers, contractors, suppliers and users agreed to reduce from 37 to 17 the number of stock sizes in copper conductors used in building construction. This means less copper and rubber tied up in inventories, more for fighting tools.

The dairy supply industries, through their association, gave conservation another lift by developing sanitary pipe lines and fittings of glass as a substitute for tinned copper and stainless steel.

Those serving every field find they can save something. Textile Color Card Association of the United States conserves dyestuffs by reducing the number of colors in all its collections and works closely with the War Department

Those trainloads of steel reinforcement for paving military roads can now be used for other purposes, thanks to new formulas of the Portland Cement Association



EWING GALLOWAY

on standardizing military colors. Even the WAACs must all wear the same tones in hosiery, shoes, gloves and handbags—a heavy feminine penalty for wearing a uniform.

Some trades found they could contribute best simply by intensifying their efforts on their everyday jobs. They serve by continuing to peddle their papers, now with an added incentive.

National Mineral Wool Association, anticipating a serious fuel shortage next winter, urges insulation of houses to save 80,000,000 gallons of oil, 1,867,000 tons of coal and 13,000,000,000 cubic feet of gas. Their solution is recommended as voluntary and painless self-rationing.

Both Drop Forging Association and Malleable Founders Society push their methods of processing as means of conserving metals. "Clean Up, Paint Up" and "Make Things Last—With Paint" are now more than trade slogans of National Paint, Varnish and Lacquer Association. They are part of the mobilization for a period of national belt tightening.

Last fall, just when citizens were first beginning to think about where rubber comes from, they read in their papers that a fire in Fall River, Mass., had licked up 14,000 tons of what was soon to be the No. 1 critical material. It was insured but that didn't seem to help much. So, no doubt, was the *Normandie* when it was swept by two disastrous

fires experienced recently. Because of congestion on the piers, the usual protection is insufficient. The Board wants emergency fire fighting equipment on the pier, with motor, pump and several hundred feet of hose. Its manual, "Safeguarding Waterfront Properties," is a practical guide for inspectors who survey these properties.

If air raids come, civilian defense forces will be better prepared for action because of the lessons learned from the film "Fighting the Fire Bomb" which affiliated local and state units of the National Association of Fire Insurance agents have exhibited to air raid wardens, schools, churches and other organizations.

Fires can negate the best laid plans of conservers. If they start from sabotage, one task is to catch the saboteur. But the first thing to do is to put out the fire. Says the National Fire Protection Association:

We continually emphasize the fact that, irrespective of whether a fire is due to incendiary bombs, sabotage or some accidental cause, the results are the same and the same methods of control are applicable. We have had to contend with the mistaken idea held by many people that guarding to prevent sabotage is all that is needed to secure continuity of production.

Salvage is one of those mass activities of war that has to be attacked through two voluntary mediums—the local chamber of commerce and the trade association. Generally more than one trade group contributes to a collection.

Keeping clean helps save

The grease-for-explosives drive, one of the most effectively publicized and best coordinated, started with a local effort in Chicago and an editorial in the *Chicago Tribune* urging people to consume more soap, instead of conserving, since a by-product of soap-making is glycerine—a vital element in high explosives for war. More fat means more soap-making, hence more glycerine. W.P.B. endorsed the move to have housewives save their kitchen grease, and the Association of American Soap and Glycerine Producers offered to sponsor a national campaign.

"How much will it cost to do the job?" asked Roscoe C. Edlund, manager of the association. He was told that \$490,000 would be about the size of it.

"I don't know any place where we could better do our part. As the representative of the glycerine producers of the country, I'll take upon myself the responsibility of raising the money." He did, by personal calls and letters to members of his industry.

Advertising Council, a war organization made up of advertising agencies, national advertisers, magazines, newspapers, outdoor and radio media, next entered the picture to help with an expert analysis of the advertising problem, and to create the "copy platform," theme and functional campaign.

One other step was necessary. The advertising men knew there must be a "point of sale" and a physical means of getting in the grease. American Meat Institute provided both.

The Institute brought meat dealers into the set-up. It organized 500 regional committees to handle store distribution of advertising matter and to receive the grease salvaged by millions of housekeepers eager to have a part in making bombs and shells. The whole country was blanketed just as business would do in a well organized advertising campaign.

Getting in scrap was all in the day's work for the National Association of Waste Material Dealers. Long before Pearl Harbor, the association's leaders were conferring with the War Department, offering suggestions on scrap collection and distributing 20,000 posters asking industries and waste dealers to "Deliver More Now" for defense production.

Later, some weeks before President Roosevelt's appeal for scrap rubber, the Association tried to prepare the way



Army turned to the nurserymen's trade group for expert advice on plants available for camouflage

fires in succession. There wasn't even the comfort of charging it up to saboteurs.

The insurance man's first job ordinarily is to see that every risk is properly protected against financial loss but, in emergencies such as today's, this function gives way to a concern, both selfish and patriotic, that there be fewer losses. National Board of Fire Underwriters is trying to do something about the appalling list of serious waterfront



U. S. ARMY SIGNAL CORPS

The restaurant industry helped to pick men who can prepare tasty dishes even in Army field kitchens such as this. In addition, it revised the Navy cook book

by sending out 14,000 letters promising dealers, in the name of W.P.B., that all the scrap rubber they could collect would be taken off their hands at satisfactory prices. Now the waste material dealers are trying to get in 10,000,000 pounds of old silk stockings for use in making powder bags and parachutes.

"Is this a private scrap or can anybody get in it?"

That hoary gag about a bellicose Irishman will no longer amuse an audience but it probably suggested a war slogan that will make a line in history. "Get in the Scrap" signs at thousands of filling stations reminded millions of motorists, bicyclists and pedestrians that nobody is barred in this scrap—at least nobody who had as much as an old ragged pair of rubbers to contribute.

The scrap rubber drive yielded 454,000 tons—less than a few enthusiasts had expected but nearly twice as much as some government estimates had predicted. The Petroleum Industry War Council was directly in charge, bringing together Government and industry forces.

Salvage grew to such proportions that some central direction was needed. Industry won the right to make this its own job and the American Industries Salvage Committee was set up as an overall voluntary agency to do it for the Conservation Division of W.P.B. Under the Committee's direction, a continuing scrap campaign is in progress, beating the bushes in every county and city across the continent.

The Automotive Safety Foundation set itself the task of coordinating the efforts of all those organizations—trade, civic, professional, labor, farm and others—which can help to keep America on wheels throughout the war.

As a result, riders voluntarily are doubling up three and four to a car, more than 1,000 city transportation administrators and voluntary workers are directing local vehicle conservation efforts, and industries, stores and schools are staggering hours to take the load off public transportation.

A U. S. Public Roads Administration report showing that automobile traffic has declined almost as much in the non-rationed states as in those that have gasoline rationing proves that the efforts of these voluntary organizations to induce people to conserve motor transportation are bearing fruit.

The American Transit Association furthered the cause of conservation with its booklet for bus drivers, "Get Behind the Wheel of the Victory Drive," giving 58 specific ways to reduce consumption of gasoline, rubber and other vital materials. International Association of Milk Dealers went to the Office of Defense Transportation with its own plan to reduce mileage of milk trucks.

Conservation of transportation services extends even to the railroads. No matter how efficient railroad operatives may be, part of the performance is up to shippers and receivers. Although the time limit within which a receiver of freight must unload a shipment cannot practically be set by law, the National Association of Shippers Advisory Boards has been able, since the war began, to reduce the time to a rather low minimum.

In Detroit, demurrage charges on one terminal railroad had been running from \$10,000 to \$14,000 a month before February, 1942. By April they had been cut to \$6,000. At the Pittsburgh produce terminal, demurrage ran \$1.25 per car received in May, 1941; last May it was only 14 cents.

The shippers' association is applying lessons learned in the first World War. Then, under government operation of the railroads, a transportation priority system was in effect. For a time confusion reigned in railroad yards, with employees puzzled by so many priorities that "nobody knew which priority had priority over other priorities." Now, with shippers' boards working quietly in 500 communities, the biggest traffic in American railroad history is being handled smoothly and swiftly.

3 ★ The Fact of the Matter

The grain must be picked from the mountains of chaff in government-released information and then relayed to industry. Trade associations also are bureaus of specialized information for government. Pork puzzles British housewives

IT WAS one of those days that make men gray prematurely. In the headquarters office of the American Paper and Pulp Association in New York a special clarification of an important Priorities Order from the W.P.B. was ready to mail. The order was one of those that only a Philadelphia lawyer or an economic Einstein could understand. To explain its application to the paper industry, the association had prepared a chart, of which 10,000 copies had been printed.

Then the blow fell. The mail brought a release saying that the order would be amended in important respects. The labor of interpreting it would have to be repeated.

One of the big functions of a national trade association has always been to act as a two-way channel of information: from Government to its industry; from industry to Government. With the enormously distended scope of government activities in war, both channels become torrents. An executive of the Dairy Industries Supply Association says:

We have helped our industry learn more about itself within less than a year than any circumstances or adjurations in any previous ten years had led it to discover.

More publicity releases, orders, regulations and appeals come out of Washington in a day than could be published in five issues of the nation's largest newspaper. They must be sifted and relayed to industry. As Thomas W. Rogers, general manager of the American Finance Conference, puts it:

Relevant matters are separated from the irrelevant and information concerning these is placed in the hands of our members at the earliest possible moment.

National Retail Furniture Association translates government regulations affecting its trade by distilling the meaning from their legal phrases and rewriting in furniture men's language.

Most alert trade bodies keep a mass of pertinent information from Washington flowing out to their members. National Electrical Manufacturers Association, for instance, reproduces all orders of special interest and mails them out within 24 hours of their issuance.

Direct Washington contacts are now almost a "must." That's why the Department of Commerce can report that more than 250 national trade associations have either headquarters or contact offices in the Capital.

The Commercial Refrigerator Manufacturers Association holds idea and experience exchange clinics at which members have a chance to pick up the best of what others have learned about conversion to war production. A number of associations have been holding "Priority clinics."

Limited Price Variety Stores Association helped its members to comply with the O.P.A. order requiring the

posting of prices on every article of merchandise displayed for sale.

Association of National Advertisers submitted a list of questions to the Office of Censorship, passed the answers on to members to show just what sort of advertising copy and illustrations must have censorship clearance.

Managers are demanding facts as never before to meet new situations. And they are getting them hot off the griddle. Here are a few of the war-time helps rendered to industry by the American Management Association:

How to set up a priorities department within the company, how to make a smooth transition from single to multiple shifts, how to retrain employees, how to convert from peace to war-time operations, how to induct women workers, how to get the most life out of equipment, how to salvage critical materials, how to maintain good production control, how to obtain closer cooperation with labor, how to organize executive staffs for expanded war operations.

Now for the channel flowing in the other direction.

Imagine for a moment that you are an officer in the War Department charged with concealing important civilian installations and military defenses from enemy aerial observation and attack. You want to know what available plants and shrubs would make good camouflage. Where would you go for that information? To the American Association of Nurserymen, to be sure. That's precisely where the Army engineers went, and they got what they wanted. For details read the first good history of World War II when it's published.

To revert to the trite, this is an age of specialization—and the most intensely specialized of specialists, next to the entomologists, are the trade associations. They have data in their files that can be obtained in no library, statistics that the Census Bureau doesn't have. If the data or the statistics are not on hand they can generally be obtained.

The Government wanted help in formulating better and more uniform specifications for refrigeration equipment. It was forthcoming from the manufacturers' association in the industry.

They can eat the insulation

The Navy wanted a computer for cameras with a simple method for finding the correct photographic exposure at any time of day in any part of the world. Army asked for a new standard of controlling quality in mass production operations—one that would warn of trouble on the production line leading to spoilage or rejections. American Standards Association handled both assignments.

When the Army made a test of highway transport in moving troops and equipment, it called on American Trucking Associations to help work out the plans. About 150 trucks and buses were obtained to move a division from Pennsylvania to North Carolina. A.T.A. staff men accompanied the convoy to advise the officers and to act as trouble shooters.

A laundry in a Southern camp was having trouble with soldiers' jackets made of wool and cotton. Dry cleaning would not cleanse them well and when washed they shrank badly. The American Institute of Laundering sent a field man to the camp and a satisfactory laundering formula was devised.

The British were worried about refrigerated shipping space for cured pork products. They had a scheme for putting mobile refrigerating units into the holds of regular vessels, and perhaps insulating the holds with cork. Experts at the American Meat Institute didn't think it would work. Together with the refrigeration folks, they devised a way to ship frozen meat in steamers having their holds lined with frozen lard. A boat was made available and the idea tried out. When the vessel reached its destination in Britain, 28 days after loading, the meat was in per-

fect condition. So was the lard. With edible insulation, no food cargo space was lost.

A curious situation arose out of this lend-lease shipment of meat abroad. British housewives didn't know how to prepare our cured pork products.

"What can we tell them?" asked the British Ministry of Food.

The Meat Institute people had to make a long study before they could answer. For one thing, they needed to know what else British housewives had to serve with the meats. But a book of recipes was worked out, tested and sent to Britain. Now, if you could listen to BBC programs almost any morning, you would hear about these recipes. American pork is becoming popular among the beef eaters, and that won't hurt the post-war market for hog producers.

National Canners Association was asked to test Army recipes. National Restaurant Association revised the Navy cook book. The soap and glycerine manufacturers offered the services of their research department to W.P.B. for making certain studies in glycerine. The offer was accepted and a number of projects are under way.

"What can we use for money?" was never a more poignant question than "What can we use for tin, rubber, silk, steel?" Particularly steel.

Engineers of the Portland Cement Association came up with a good answer to that one. Every year trainloads of steel are sealed up as concrete reinforcing. The Association produced the facts to show that much of it can be saved. Its formulas eliminating reinforcing steel from concrete pavements promise to save 100,000 tons this year.

P.C.A. engineers made a study of the design of five structural steel military warehouses and showed that the use of reinforced concrete would save 67 per cent, or more than 4,700 tons of steel, as compared to the all-steel design.

The biggest specialists' corps is not in uniform. It toils in mufti, its jobs are prosaic and "directives" are not needed to command its best efforts.

4 ★ The Right Men in the Right Place

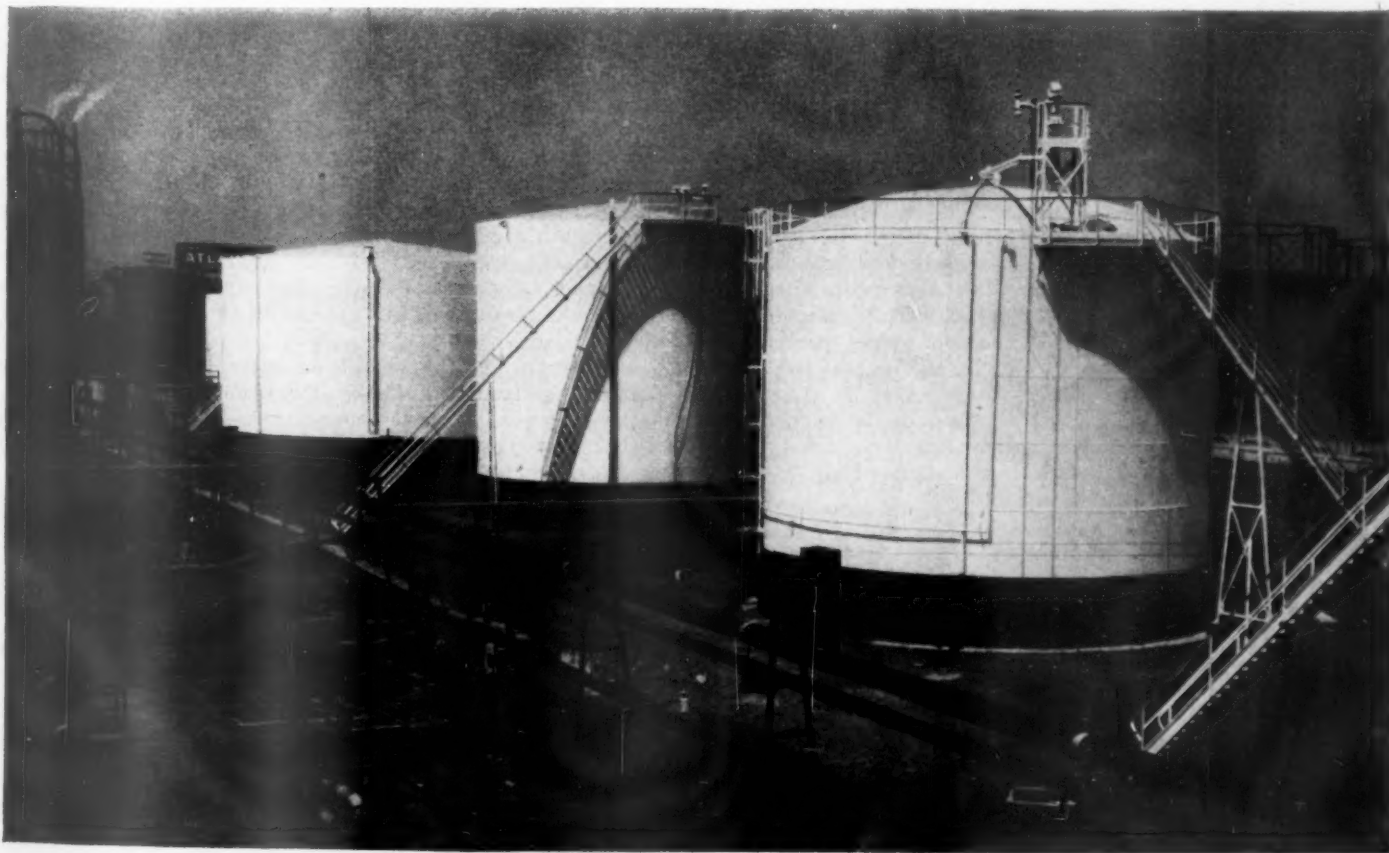
Men could be drafted but there was a point in selecting and training where compulsion must cease. Submerged talent, special skills and aptitudes had to be located by voluntary agencies and again the Government asked rather than commanded. Finger-snapping doesn't help

A CONFERENCE of educators was in progress at the Deschler-Wallach Hotel in Columbus, Ohio. It had been called by representatives of the National Association of Broadcasters at the request of Army and Navy officials. The object was to do something about training radio technicians. Thirty-six Ohio colleges and universities were represented, along with the U. S. Office of Education.

Speeches were made and applauded. Agreement on the pressing need for technical radio training was apparent. Then someone moved that a committee be appointed to develop a course and report later. Before a second was heard, Arthur Stringer, N.A.B. promotion manager, got the floor and spoke to this effect:

Why appoint a committee? Let's do it now, while we are all together.

The assembly agreed. A group of competent men got together in a hotel room at 3:00 p.m., rolled up their aca-



Tanks painted aluminum color without using any of that critical material. Alternate paints were developed by trade association chemists



Making radio apparatus for the Navy in a General Electric factory. Broadcasters were called on to develop training courses for the thousands of radio technicians needed by the Government

demie sleeves and went to work. When they adjourned at 1:00 a.m. a standard course in the fundamentals of radio had been drawn up.

Ohio educators lost no time in establishing radio schools at points convenient to students. Soon 45 other states had fallen in line. In a few months 22,000 students had been enrolled.

Few persons will dispute the wisdom and necessity of the draft in an emergency such as the present. But there are many things that military conscription cannot do, at least in a free republic. The Government can conscript auto mechanics but, if enough mechanics are not available, it cannot snap a finger and order them created. In the choice of automobile repairing as a vocation to be learned and followed, the individual will and inclination must be consulted. Even the major generals sometimes have to make requests instead of issuing orders.

It was a request and not a command that the War Department made of the American Transit Association for help in recruiting automotive maintenance technicians and instructors for the Army. The response was immediate. The association sponsored a series of regional conferences that resulted in some 400 transit executives volunteering to interview candidates to serve in training personnel for the mechanized forces. Through their efforts 600 trainers have been accepted.

National Automobile Dealers Association undertook the responsibility of sponsoring the formation of two regiments of motor mechanics for the Army—7,500 officers and men.

The Association of Casualty and Surety Executives contributed to the same need. It sent a staff of specialists from its conservation bureau to the motor transport base

at Baltimore to organize a training course in safe driving for men of the Motor Transport Corps.

The Corps of Engineers asked Associated General Contractors to recommend high type men from one contracting field for commissions—men able to take charge of important construction projects. From this source a number of capable officers have been recruited. The association likewise helped to locate for the Army a corps of men trained in the care of heavy construction equipment. These men were inducted into the heavy armored ordnance division.

National Restaurant Association lent its services in selecting from among draftees men with food service training who would be most suitable to do similar work in the Army. It supervised shore training for Navy cooks and located capable directors for war plant cafeterias.

Lists of critical occupations in the mining, smelting and metal refining industries were compiled under the direction of American Mining Congress, for Selective Service, War Manpower Commission and U. S. Employment Service. The lists were published officially as a guide to draft boards in occupational deferment of workers.

National Electrical Contractors Association, observing that, in spite of the enormous volume of construction, thousands of smaller electrical contractors were getting none of this work, undertook to place idle skilled employees with contractors working on war orders.

Industry organizations have also played a part in improving labor relations. Associated General Contractors, for instance, as the representative of employing contractors, functions almost daily in smoothing over the rough edges of labor controversy, acting as go-between in contacts with Army, Navy and labor unions.

Most trade association executives, in the very nature of their work, are inclined toward moderation and conciliation.

Back in July, 1940, a Civil Service official came to the National Association of Broadcasters' offices in Washington. He wanted right away 100,000 skilled tradesmen to work in government-operated munitions plants. Could the association help him?

It could and did. A series of one-minute spot broadcasts was prepared and sent out to all radio stations. The stations rotated these announcements in their daily schedule. Listeners who were either unemployed or doing some form of unskilled work heard the call to return to their trades. In a few days men were applying by the thousands. Within a year, not 100,000 but 500,000 were recruited. By February, 1942, about 20 months, 1,600,000 mechanically skilled workers had been recruited for these government-operated plants as a result of announcements by radio stations.

A phenomenon of the times is the way every goal, whether in manpower, materials or money, has had to be continually revised upward. There is no ceiling. No American saw in advance the load that the nation would have to bear. Those who have been nearest to the facts, most realistic, are the specialists.

1,500 Nurses a day

News of the radio muster of mechanics spread. In rapid succession, the Navy, the Marine Corps and the Coast Guard asked N.A.B. help in speeding the march of recruits. Civil Aeronautics Bureau wanted non-combat flyers. All received assistance. Soon the association's promotion manager was assigned to devote his entire time and the resources of his office to war work.

Reports made to the Health and Medical Committee of the Federal Security Agency showed a serious lag in nurse recruiting. Young women yearned for the glamor of WAAC's and WAVES, for civilian defense uniforms and the masculine swagger of working on bomber jigs. Nursing, the oldest and most vital of women's services in war, was going begging.

The N.A.B. suggested a campaign. Nearly 90 network sustaining and commercial programs carried an appeal for more student nurses. This need was assigned an "A" priority for local station announcement.

That campaign soon had applications pouring into the nurse recruiting stations at the rate of 1,500 a day. In less than three weeks most of the nursing schools reported capacity enrollment for the semester opening in mid-summer.

The extent and value of these radio aids in mobilizing the nation's strength, all without charge, are difficult to conceive. A recent recapitulation of "free commercials" by 900 radio stations, made to N.A.B. and covering only May, June and July, gives some indication:

	"Spot" Announcements	Programs of Varying Lengths
Recruits for fighting forces	417,910	39,344
Civil Service	67,900	
Recruiting doctors and nurses	43,590	1,631
Treasury (war bonds and stamps)	510,090	65,832
U. S. O.	73,340	3,000
Red Cross	58,100	1,200
Army Emergency Relief	16,220	300
W.P.B., O.E.M., O.P.A., etc.	187,010	23,500
War industry training	27,250	860
Civilian defense	53,980	9,100
Other government agencies	65,210	20,880

These figures are necessarily incomplete. In the first place they exclude all network features, as well as programs and announcements sponsored by radio advertisers. Navy relief, Russian relief, China relief and other similar voluntary movements are not included, nor are such war

propaganda program series as "You Can't Do Business With Hitler," "The Home Front," etc.

But this partial roundup of 1,550,580 spot announcements means an average of 1,723 a station, or roughly 20 a day.

5 ★ Bellwethers for the Public

In war the people must be educated all over again, made angry but kept cool. Advertising is just as effective in this psychological warfare as in selling goods. Then, too, the hostile critics of business and its performance are refuted

TOTAL WAR is fought in three strata at once—military, economic and ideological or psychological.

Beyond our borders we conduct offensive assaults on the states of mind of enemy peoples. At home we repel the enemy's psychological incursions and attempt to build up impregnable defenses in the minds and bosoms of Americans. Today this form of warfare dictates the theme of most current literature, advertising and public vocal utterances.

War is the major copy theme of advertising today. Thousands of voluntary agencies join in, all selling the same commodity—the will to victory. This welter of psychological suasion includes some badly conceived and badly executed publicity that may do more harm than good. Hence it is highly appropriate that the advertising brains of the nation, through the Advertising Council, should offer its expert services to public agencies to see that advertising does its very best work in winning the war. These services are contributed gratis.

The Council maintains offices and staff in New York and Washington. When a governmental advertising project has been approved by federal officials and by the Council, a project group is set up under the direction of a coordinator who is a prominent national advertiser. This coordinator selects from the more than 2,000 skilled advertising people and the 450 volunteer agencies a task group of specialists to handle the project much as an agency would take up a commercial campaign.

Advertising Council states clearly that it is a temporary agency formed for the one specific purpose of winning the war. It is not concerned with propagandizing any other movement, cause or interest and it has no relation, even indirectly, with censorship.

Other voluntary organizations approach the problem of guiding public opinion in diverse aspects.

At the onset of war, National Association of Broadcasters realized keenly its responsibility and trusteeship. With public nerves keyed to a high pitch and opinion extremely sensitive to a wrong touch, the association gave its best thought to the preparation of a "War-time Guide" for broadcasters.

In this guide stress was placed particularly on calmness and discretion. Members were advised to "Remember the Men from Mars" and circulate no rumors or in any way unnecessarily alarm a jumpy public. They were counselled not to permit sponsors to use the news as a springboard for commercials—as, "Now some good news, etc." And they were told the sort of announcements that might aid the enemy.

Morris Plan Bankers Association decided that its best contribution would be an attempt to disseminate some economic literacy on the badly-battered topic of inflation. Its officers believe that certain forms of inflation can reduce a victorious nation to a state as bad as that of a country that has been invaded and conquered by its enemies. Through the Consumer Banking Institute, they selected

three informed and impartial economists from Princeton University to do a series of ten short articles on inflation, written simply for the general reader. The articles were supplied to 1,000 daily and 1,200 weekly newspapers, with the suggestion that they be reprinted serially, with or without credit to the association. Mats were provided for the charts. Further distribution was obtained through pamphlets sent out by member banks.

This was followed up by a similar series on taxes. Both were given wide circulation.

Briefly, the purpose served was to impress these facts on the reader:

1. Inflation is a destroyer that must be stopped by preventive measures in time.
2. Living standards must decline in war-time.
3. We must all spend less and save more.
4. We must submit to very heavy taxation for the double purpose of partially financing the war and siphoning off excess purchasing power.
5. We must become reconciled to credit control, price control and rationing as inflation deterrents.

The same steadying influence on public opinion and habits is being exerted by National Association of Mutual Savings Banks. Levi P. Smith, president of the association, expressed its policy:

There never was a time when saving meant more to the individual and the nation. This is the time to pay off mortgages, to invest in War Savings Bonds, to sustain savings accounts and life insurance and otherwise to put away the present penny for the future dollar.

One function of the Automotive Council for War Production comes within this zone of public education. That is the job of keeping the public informed of the automotive industry's performance in war production.

This performance by all industries is rapidly becoming what the historians call an epic. But as long as critics try to magnify industry's mistakes, someone must present the other side.

War's greatest casualty is truth. A great historian has

said that in war men propagandize so diligently that even language tends to lose its normal meaning. This time organized business is alert to see that propaganda shall be directed against the enemy and not at groups among ourselves.

6 ★ Raising the Wages of Mars

While community organizations of business were beating the bushes to sell War Bonds, industry groups were supporting their efforts

JULY 1 was M Day for money to finance the war.

At noon on that day stores in every city, town and cross-roads started the biggest sale in their history—War Savings Bonds and Stamps. For one month they pushed these two items as their big store special.

For the first 15 minutes many stores sold nothing but bonds and stamps. Salesgirls in colorful uniforms circulated through the sales floors loaded with baskets of the war "merchandise." Customers mobbed them as in a pre-Christmas buying rush.

This was the retailers' contribution. Behind the mammoth "Retailers for Victory" sale were hours of patient conferences by the principal retail trade associations under the direction of Maj. Benjamin H. Namm, of the National Retail Dry Goods Association, and his Retail Advisory Committee to the Treasury.

So intensive was the drive that the Treasury hung up a record of almost \$1,000,000,000 in bond sales for that month. Some \$300,000,000 of it was credited to the smashing drive of retailers. On July 17 alone—it was "American Heroes Day"—retailers contributed an estimated 32,000,000 lines of advertising to the campaign.

It is possible to mention here but a few of the trade



Safety, freedom of movement and looks are demanded of women's factory garments. Cotton Textile Institute's overalls style show satisfied all three requirements

LAWRENCE KRONQUIST

association boosts to war bond sales. All of them have contributed in one way or another.

Limited price variety stores have acquired a technique in selling goods marked at ten cents, 25 cents, 50 cents and a dollar. Knowing this facility, their association felt secure in pledging its trade to sell stamps and bonds in an amount not less than two per cent of total sales in 1942. That pledge is being fulfilled. In July the ratio was ten per cent.

Association of Soap and Glycerine Producers was prompt to put its own employees on a pay roll allotment plan for war savings. Every employee contributes—an average of 10.83 per cent of salaries.

The plan was recommended to members and 83 per cent of all employees in the industry are enrolled. One large soap company reports that all of its 6,000 employees are buying stamps and bonds regularly.

Contractors encountered complications in adopting pay roll allotment. In the case of the fixed-fee contract, certain regulations stood in the way, but Associated General Contractors ironed out this difficulty with the Comptroller General's office.

In trying to keep free enterprise alive through this emergency, business faces the necessity of proving over and over the merits of voluntary action as against compulsion. In no respect is this truer than in financing the war. Those who say that a republic should finance its wars by means short of fiat money, which in effect is sheer confiscation, are asked to specify those means. If they suggest, as most business men do, that government should pay its way as nearly as is possible without hardships damaging to national morale, then borrow the remainder from its citizens, they are committed to two immediate courses. One is the acceptance of heavy taxes and the other is raising money to fill the gap, by sales of government securities to citizens.

Encouraged and spurred on by organizations such as the Institute of Life Insurance, the life companies themselves have bought \$2,000,000,000 of government securities this year. The life insurance agents, acting through the National Association of Life Underwriters, have sold another \$1,000,000,000 in war bonds to 8,500,000 persons in 46,000 employee groups.

U. S. Savings and Loan League negotiated with the Treasury Department to have savings and loan associations made issuing agents for Defense Stamps and Bonds early in 1941. While selling their own thrift medium, these associations had sold \$25,000,000 of Series E Bonds before we were at war. That was preparedness in the economic zone.

Individual savings and loan associations have invested \$100,000,000 of their own funds in war bonds.

Outdoor Advertising Association of America organized a poster campaign for the Treasury and distributed 4,500 copies of two poster designs.

Investment Bankers Association gave bond sales a boost by distributing 100,000 reprints of a magazine article—"Invisible Greenbacks."

7 ★ Keep the Home Fires Burning

In the last war the final collapse of the enemy came on the home front, not the military. The military point of view is most potent when restrained and balanced by the civilian. Liaison between government and people is necessary

AT 7 A.M. on a Sunday morning in February, 52 earnest business men convened in a caucus at the Ambassador Hotel in Washington. They were members of the National Association of Independent Tire Dealers, representatives

of 60,000 of their trade. They were disturbed by the federal order freezing all tire stocks. It looked as if they had been put out of business.

Finally the group went before the Senate Small Business Committee but not to ask for help. As the president of the association, Bill Hickey, of Hartford, explained:

We shall not go before the Senate with our hats in our hands. We shall not ask alms. Our country is at war, a war for survival of the democratic principles enunciated in 1776. We shall not ask to be saved; we shall demand the right to serve in saving the world for decency.

Mr. Hickey's idea was that, with a serious rubber situa-



U. S. ARMY SIGNAL CORPS

In a war of production, military and civilian organizations team up in the same harness

tion and the biggest rubber stock pile in the hands of dealers, those dealers had a job to do in distributing it, in servicing the tires in use and in retreading to keep automobiles rolling as long as possible.

Later the association obtained an allocation of rubber for retreading and won recognition of the part dealers could play in distributing new tires to those with priorities. It obtained permission to liquidate overstocks of new tires so that they could be sent where they would be needed and started the distribution of obsolete sized tires. Independent tire dealers for the most part are still open for business and doing their part in the war.

The trade association is more than just an advocate for its industry, important as that function is. It helps to balance government officials and keep them from imposing wildly impractical controls. And it reconciles business to controls ordinarily dictatorial but inevitable in war.

Work of the National Highway Users Conference has served two valuable purposes. First, it shows motor vehicle operators the realities of rubber rationing and the necessity of conserving tires, trucks and passenger cars. Second, it balances the civilian and military points of view in the allocation of rubber for tires and metal for repair parts. The military mind, uninfluenced from the outside, finds it difficult to see that trucks on the highways and passenger

cars taking war workers to their jobs may contribute to victory equally with tanks and planes.

Farm Equipment Institute compiled complete data on the material requirements of its industry and submitted them to the O.P.M. Without this assistance in pleading its case, agricultural production might have been hampered much worse than it now is.

Some administrator proposed to limit truck hauls to 300 miles. That looked like a smart idea until specialists from the American Trucking Association, at a public hearing, showed why it wouldn't work. No man sitting behind a desk in Washington can see these things. If the sane, guiding voice of business had no way of expressing itself collectively in Washington the chaos might soon be ten times worse confounded.

If the subadministrator in O.D.T. who was responsible for the order requiring hire trucks to carry return loads of 75 per cent of capacity had first consulted a trade association man in the trucking field he would hardly have issued a directive that had to be revoked because it failed to work.

Edison Electric Institute devoted a series of conferences to ways of servicing electrical appliances, both domestic and commercial, to keep our equipment running at a time when it cannot be replaced.

The girls are not forgotten

Institute of Life Insurance is conducting a "Keep Well" crusade through national advertising. With so large a proportion of doctors and nurses in the armed services, an epidemic on the home front could become a national catastrophe. Tens of thousands of women are doing unaccustomed labor and men in many vocations are overworked by normal standards. The Institute's health education is designed to overcome these handicaps by inducing civilians to live the hygienically good life.

"What sort of work clothes should women in factories wear?" is a project the Cotton Textile Institute assigned itself. Converters of the American School of Design were asked to submit ideas for a factory garment style show, probably the first one ever held. Three conditions had to be satisfied: freedom of movement, safety, and of course, looks. All are being met and a new vogue is launched.

To determine the special furniture needs of war workers living in housing projects, a joint committee representing the two large associations of furniture manufacturers made a survey in 18 war production centers. It disclosed particularly a demand for smaller, more compact furniture.

Music dealers found their place in the parade to be the promotion of record playing in war factories. Now their National Association of Music Merchants is throwing its energies into selling this thought to all who can act on it. They find that music hath power to step up production and lessen the fatigue and boredom of routine work.

Some of these programs are merely good business, it may be said. Of course. And all the better, if winning the war can be combined with good business. Not all of us can beat a drum or carry a flag. Some must tend shop at home or there will be none to buy bonds and welcome back the warrior legions to the homes they went away to defend.

In the first war in which as many civilians as combatants are killed, civilian defense looms large.

American Transit Association's Blackout Committee worked out with the War Department standard specifications for street car and bus lighting during blackouts. The Restaurant Association offered the services of restaurants to the Red Cross as central mass feeding stations in case citizens are driven from their homes by bombing or in any other way. The two organizations evolved a detailed plan against such emergencies.

And after the firing ceases, where do we go from there?

Industry and trade groups are thinking about that one, too, although it's distinctly secondary to the immediate task.

Every post-war problem hangs on one question, "How long will the ordeal last?" Chairman May of the House Military Affairs Committee says certainly this year, probably next year. But most prophets say he is a minority of one.

A big consideration is peace-time markets. In a short space we have moved from a period of surpluses to one of shortages. Fixed minimum prices have given way to fixed maximum prices. Production of many commodities other than munitions is being stimulated to the utmost. What will become of all this production capacity when peace returns and there is the usual consumption letdown?

One of the trade groups alert to this situation is the meat packers. Says Norman Draper, director, American Meat Institute:

History has taught us with painful clarity that if we neglect consumers they will neglect us. Producers have been urged to step up production drastically and they are doing it. After the war our industry will have on its hands the largest production of meat ever seen in any country and the demand and public acceptance we are creating for that meat right now should play an important part in the future welfare of our industry and the growers of livestock as well.

A committee of life insurance men is studying post-war reconstruction for its Institute. Producers Council has a similar committee, which has issued in booklet form a symposium on "Postwar Planning for the Construction Industry." The railroad association is making a long range study of the transportation future.

Steadfast in the faith

In a republic there is no substitute for the spirit that goes with voluntary performance. That's why the public service rendered by organized trade groups is something that could not be drafted.

Trade association leaders are living up to the estimate of them expressed recently by Jesse Jones, Secretary of Commerce, when he said:

We look forward to the increasing importance of trade associations in the war effort. We urge you not to wait for government to ask you to help but to make it your major business to anticipate ways and means by which your associations can be of war service, and to offer plans for action before being asked for them.

That is just what most of them are doing.

Where trades and industries are not dealt with through their regularly authorized spokesmen we are failing to mobilize fully for war. To organize an industry all-out for war calls, first of all, for making complete use of the machinery of organization already in existence, where that machinery is responsible and efficient.

Because they are, above all, realists, trade association men lack the political glamour of the spokesmen for pressure blocs. They do not shine in controversy. Fiction, fancies and Utopias are not in their kit of professional tools. When they build air castles they are likely to follow Thoreau's advice and put foundations under them before trying to sell them to anybody.

These are the liaison men who can, whenever permitted to do so, establish a real partnership between government and business. They can prevent officials from going off the deep end of needless regimentation. They can, by their counsel, help government to avoid its worst mistakes.

On the other side of the partnership, the responsible leaders of established trade associations are the men best fitted to bring about 100 per cent mobilization of their trades for war. Which means an American business community hopeful, alert to every opportunity for service and steadfast in the faith.

Dozens of examples could be cited to show how federal pay rolls are loaded down with non-essential employees



Ideologies in the Budget

By SEN. MILLARD E. TYDINGS of Maryland

ARE THEORISTS taking advantage of the war effort to entrench themselves and their policies?

This veteran legislator believes that they are

CONGRESS and the public ought to know what is going on in the Bureau of the Budget.

Preliminary investigation by a Senate appropriations subcommittee of which I am chairman discloses a situation which is disturbing to every American who is looking forward to war's end and the resumption of normal living.

There is real danger that influential theorists and ideologists, taking advantage of our whole-hearted national absorption in the war, may entrench themselves and their policies without the consent of Congress or the people.

The creation of the Bureau of the Budget 21 years ago was a wholesome reform. The Bureau was designed to make frequent surveys of the Government's administrative machinery and, from these surveys, to keep order and bring efficiency throughout the Government's many functions and thus to

supervise and achieve the greatest possible economies in federal finances.

But what is happening now?

Our subcommittee discovered appalling inefficiency, duplication of functions, waste, and mal-distribution of personnel among both war and non-war agencies of the federal Government.

Worse still, it found that some of the officials specifically charged with correcting such conditions were either uninterested in curing them, or deliberately avoiding doing so because inaction will better enable them to put into effect after the war their deficit

spending theories which neither Congress nor the people have sanctioned.

The subcommittee has warned the Senate that certain officials of the Bureau of the Budget and of the closely related National Resources Planning Board are carrying on "discreet, but none the less pernicious, propaganda to the effect that, after the war, the federal Government must continue even greater mounting deficit spending than was followed during the decade preceding the defense and war expenditures."

The subcommittee has proposed a full investigation by the Senate appro-

priations committee, and I have introduced a bill which would permit the Civil Service Commission to correct some of the evils we found by compelling the transfer of employees from non-essential government agencies to the essential war agencies.

It is sheer tragedy that, in some administrative agencies in Washington, the employees have so little to do that they write protesting letters to the newspapers about it, while war agencies at the same time are sending out nation-wide appeals for more personnel.

Dozens of examples could be cited to show how federal pay rolls have been loaded down with non-essential employees. Let me cite just one. Thousands have been employed in recent years to carry on information, public relations and propaganda activities. Many of the information services are providing a useful, needed public service. However, in too many cases, the chief object of these activities is to perpetuate or curry favor for the government agencies to which the employees are attached.

In the fiscal year ended June 30, 1941, at least 8,000 such employees were on the federal roll at a cost of more than \$27,000,000. Since then an additional enormous number of public relations and information men has been added to serve the war agencies. I do not have the figures on the cost of operating the Committee on Public Information which Mr. George Creel headed in the last war, but I venture the guess that his entire world-wide organization functioned for the entire period of our participation in that war at a fraction of the cost of today's comparable services.

Still "spending for prosperity"

THE duplication of effort, the disorganization of the federal administrative offices, the waste of taxpayers' money is shocking. Its existence is so widely known, so obvious to everyone, that the only reasonable explanation appears to be that a deliberate effort is being made to keep intact the far-flung and bewildering non-essential agencies so they will be ready to pour out more

billions of federal funds when the war is over.

The subcommittee named as leading proponents of the deficit spending theory Dr. Gerhard K. Colm, principal fiscal analyst of the Bureau of the Budget finance division; Prof. Alvin H. Hansen, consultant to the National Resources Planning Board, and Dr. Gardiner C. Means, who holds a sort of roving commission between the Bureau and the Board.

These three officials possess much wider influence than their formal titles indicate. They have been diligent in advocating their belief that the Government should spend more money than it receives in any one year—a policy which could lead only to national bankruptcy.

The subcommittee called attention to an article by Dr. Means published in the May, 1942, issue of the *American Journal of Sociology*, entitled "Economic Institutions," and carrying the notation "Bureau of the Budget (on leave), Washington, D. C." This article seeks to justify deficit financing as the proper and continued policy for a nation with a matured economy which, it claims, now exists in the United States.

Dr. Colm is the most active of the trio as an exponent of these theories. Dr. Colm's training was perfected in Germany and, although the subcommittee emphasized that it did not want to imply that Dr. Colm was in any sense unloyal to the United States in its war effort, it did point out that he may not be thoroughly familiar with American problems, traditions and institutions. The subcommittee added in its report that "it is a matter of great significance that a man of his point of view should be in a strategic position



One week's government publicity releases would require the entire space of the New York Times for five days



to shape the government fiscal policy and, in addition, attempt to persuade the people of the nation to accept his philosophy."

Here is Dr. Colm's background as shown by records of the Civil Service Commission:

Lecturer in economics, School of Business, Berlin, 1926.

Lecturer and professor in economics at Kiel University, 1927-1933.

Member of Research Department, Institute of World Economics, Kiel, 1927-1929. Head of same department, 1930-33.

Professor of economics, graduate faculty of political science under the New School for Social Research, New York, 1933 to present time.

Dean of same faculty, 1938-1939.

Financial expert in the Division of Industrial Economics, Department of Commerce, 1939-1940.

In addition, Dr. Colm held a number of posts in connection with German fiscal affairs in the 1920's. He was research assistant of the Statistische Reichsamt (federal statistical office) from 1922 to 1925, and head of that division from 1925 to 1927. He served as statistical expert to the German delegation on reparation payment in 1935. From 1927 to 1929 he was economics expert of the "Enquete-Ausschuss," similar to our own Temporary National Economics Committee (TNEC).

Dr. Hansen, of Harvard University, is probably the chief United States exponent of the theories of Prof. John Maynard Keynes of England. He has been largely responsible for the promotion of Professor Keynes' views in this country and, as a foremost consultant to the National Resources Planning Board, has, as the subcommittee said, "undoubtedly been greatly responsible for theories that Board has prolifically expounded at government expense."

Executive to keep war powers?

FURTHER light on Dr. Hansen's views is found in an interview published with him on June 28, 1942, by the *Chicago Journal of Commerce*. Excerpts from that interview were printed in the *Congressional Record* by Congressman Woodruff of Michigan. Dr. Hansen was quoted as follows, regarding post-war policy:

Congress will surrender to the Administration the power to tax, keeping to itself the right only to establish broad limits within which the Administration may move.

Congress will appropriate huge sums of money; will surrender its power of directing when and how the money shall be spent.

Other extraordinary powers such as, for instance, to effect wholesale social reforms, will be delegated to the Administration which will retain most, if not all, of its present extraordinary war-time powers.

It is folly to think we can return to normal after the war.

This bears striking resemblance to

the "long armistice" plan which has been expounded in some quarters, by which the government war structure would be continued indefinitely after the fighting stops, and our nation governed by a dictatorship in everything but name.

In its report to the Senate, the subcommittee made this statement as to Messrs. Colm, Means and Hansen:

The committee has taken the opportunity to point out these three men in order that the Congress may be aware

of the condition now existent within the organization it created as a vital cog of the executive branch of the Government for the efficient management thereof, and specifically indicating wherein that objective is effectively being avoided and sabotaged by virtue of the activities of these and other similar individuals.

Congress has the remedy in its own hands. The public through its representatives in Congress should insist that the remedy be applied now—before it is too late.

Senator Tydings of Maryland calls attention to federal expenditure of \$27,000,000 for 8,000 public relations and information men in the fiscal year ended June 30, 1941, and "ventures the guess" that the cost of similar services in the last war was only a fraction of that amount. We asked George Creel, chairman of the Committee on Public Information during World War I, to tell us how much his organization spent. Here is his reply.

"I Am Ashamed to Give the Figure" By GEORGE CREEL

WORKING under Woodrow Wilson was a joy, because his delegations of power were complete and explicit. At every point he sought to guard against the conflicts, confusions and failures that came from fuzzy orders, duplication, overlapping and divided control. Each job had one boss, given full authority and held to equally full responsibility.

When he named me as chairman of the Committee on Public Information, just one week after war was declared, his instructions left no room for doubt or conjecture. I was to "mobilize the mind of America" and "make the fight for the verdict of mankind." Everything relating to public opinion, both at home and abroad, was to come under the C.P.I. No other department of government would be permitted to gum the works by setting up its own show.

He insisted that national unity rested on national understanding. The way to form a sound public opinion was to inform it. A free people were not children to be wheedled, soothed or humored with half truths for fear that the whole truth might frighten them. The war was not the war of an Administration, but of every citizen.

These instructions were carried out. A voluntary censorship, backed by a strict censorship of cables, safeguarded military information of obvious value to the enemy but, in all else, the rights of the press were safeguarded and respected. Neither admirals nor

generals were permitted to pass arbitrary judgment on releases. Trained men reported daily on progress, and in no other belligerent country was there such absolute frankness about every detail of the war effort.

Since all releases were purely factual, with no attempt at press agitating, the job was done simply and economically. For example, the Committee had four men in the War Department, three in the Navy, and one to serve Mr. Baruch's far-flung War Industries Board. Out of 6,000 separate and distinct news releases, only four were ever questioned.

There was no part of the war machine that the C.P.I. did not touch; no medium of appeal that it did not employ. The printed word, the spoken word, the motion picture, the telegraph, the cable, the wireless, the outdoor poster all were used in the campaign to make our own people and all other peoples understand the causes that compelled a peace-loving republic to take arms.

The country's foremost historians, scholars and publicists, working without pay, put into pamphlet form America's reasons for entering the war, the meaning of America, the nature of our free institutions, our war aims, the purposes of the Central Powers. They exposed the enemy's aggressions, misrepresentations and barbarities. Printed in many languages, these booklets

(Continued on page 113)



\$20 in paper money had to be pitted against \$1 in silver

We must indeed

By SARAH MACGONIGLE THOMPSON

WE AMERICANS who find our machine economy thrown out of gear by the impact of war are likely, in our more morose moments, to feel that we are bearing burdens that are new and peculiar to ourselves. Our ancestors, blundering through the hit-and-miss campaigning of the Revolutionary war, we think, never heard of "rationing," price-fixing or scrap saving campaigns, to name only a few.

That's where we're wrong. Weapons change. So does nomenclature. But a quick glance at history shows that, although our ancestors called them something else, they knew even more about rationing, inflation and salvage than we have had to learn. Moreover, like us, they exercised the American right to complain about it. Like us, too, they stuck it out. For example:

"To Abstain from English Manufactures"

THE celebrated non-importation agreements had the effect of rationing because they bound "the inhabitants (of the colonies) to abstain from English manufactures."

The people of the colonies had imported so many of their daily needs from the motherland that readjustment was extremely difficult. The women foreswore the luxuries of everyday life, electing to be clad in homespun rather than trade with the British. How much this involved is described in a contemporary poem by the colonial writer, Mercy Warren:

Gay cloaks and hats of every shape and size,
Scarfs, cardinals and ribbons of all dyes;
With ruffles stamp'd and aprons of tambour,
Tippets and handkerchiefs at least three score;
With finest muslins that fair India boasts
And the choice herbage from Chinesan coast. . . .

It was from other countries, of course, that these fripperies had come.

But the most heroic denial of all was the giving up of their tea. Coffee-drinking America has forgotten that it was tea to which their colonial forebears were devoted. Doing without it was a genuine sacrifice and yet, as Tudor reports in his "Life of Otis":

ful story on himself in this connection.

Stopping off on a journey at a certain Mrs. Huston's in Falmouth, now Portland, in 1774, he asked, "Madam, is it lawful for a weary traveller to refresh himself with a dish of tea, provided it has been honestly smuggled or paid no duties?"

The patriotic Mrs. Huston was not moved by this persiflage from the normally serious Mr. Adams.

"No, sir," she said. "We have renounced all tea in this place, but I'll make you coffee."

And, Adams goes on to say, he drank coffee thereafter every afternoon and "I have borne it very well."

Apparently the entire country had not "renounced all tea" so strictly as had Mrs. Huston. Later John Adams came by some tea, no doubt "honestly smuggled," which he sent to his wife, Abigail, by his friend Elbert Gerry. Mr. Gerry mistakenly delivered it, however, to Mrs. Samuel Adams who later entertained Abigail with a dish of it.

In spite of these misadventures with tea, Adams was among the most eloquent on the subject of rationing. On October 20, 1775, he wrote to his friend James Warren:

We must at first indeed Sacrifice some of our Appetites, coffee, wine Punch, Sugar, molasses, etc., and our dress would not be so elegant. . . .

"I blush whilst I give you a price current"

IN RESPONSE to constant requests from John to send him "prices current" Abigail Adams supplies such homely and illuminating details that her letters are economic history.

"Everything bears an exorbitant price and not to be had for that," is her repeated theme.

The meat market, for instance, was pretty well non-existent in Braintree



"May a traveller have a dish of tea provided it has been honestly smuggled?"

Whoever made use of this (ministerially) obnoxious herb was regarded as an enemy of the country. The utmost vigilance was employed to prevent its being consumed.

John Adams, destined to be the nation's second president, tells a delight-

Sacrifice some of our APPETITES



"Everything bears an exorbitant price and not to be had for that"

on April 20, 1777. There was no mutton, lamb or pork, Abigail reported. Neither was she able to get any molasses. Doubtless she wanted it for sweetening, because sugar was scarce then as now. For a "mean" quality, she paid "four pounds per hundred."

These conditions caused her to observe that "the Act" which had been "in some measure regarded . . . is now no more heeded than if it had never been."

"The Act" referred to was New England's effort to regulate prices. John, in February, 1777, had called it "extremely popular in Congress who will recommend an imitation of it in the other States."

Other colonies did imitate it with the intention of controlling the prices of labor, manufactured goods and domestic articles. Committees were employed to carry out the provisions.

The economic experiment—bold for those times—failed, to an accompaniment of loud outcry against "the merchants, monopolizers, etc., who . . . have created a partial scarcity."

Congress, in October, 1778, voted that "all limitations of prices of gold and silver be taken off." Yet the states continued to try to regulate prices by legislation.

The situation steadily worsened, to use the language of the economists, and, in June, 1779, things were so bad that Abigail wrote to John:

I have been able as yet to supply my own family sparingly but at a price that would astonish you.

Indian corn sold in 1779 at \$4 hard money per bushel which, according to Abigail's calculation, was "equal to 80 at the rate of exchange."

Linens, she reported, were sold at \$20 a yard, "The most ordinary sort of calicoes at \$30 and \$40; broad-cloths at 40 pounds a yard" (a pound being equal to about \$5 normal rate of exchange today). A hat cost \$50. Board ran to \$50 or \$60 a week, sugar was \$4 a pound, flour \$150 a barrel, tea \$30 for Bohea, or the lowest quality.

The help situation was acute, too: four dollars a day for a laborer, said Abigail, "and find him, which will amount to four more."

They didn't call it inflation but, by 1779, \$20 in paper money had to be pitted against \$1 of silver and, as Abigail observed, "if I sell for paper, I throw away more than half, so rapid is the depreciation. Our currency seems to be the source of all our evils."

Bounty Coats and the Coat Roll

GETTING in the scrap was important then, as now. The women "not only sacrificed the lead of window panes," says Alice Brown, "but their precious pewter for the making of bullets."

Moreover, lack of importations meant doing without imported clothing. People spun, weaved and wore their own garments, but the fighting men had first claim on homespun.

In the summer of 1775 the Provincial Congress asked the people for 13,000 warm coats to be ready for the troops before winter.

There were, as Alice Morse Earle points out, "no great contractors then as now to fill the order," but the women rose nobly to the occasion. The whirl of the spinning wheel was heard on every hearthstone and women gathered in spinning sessions, each bringing her own wheel to make "Bounty Coats." The name of the maker and the town where it was made were sewn into each garment.



They spun their own clothes, but soldiers came first as now



ROY PINNEY FROM BLACK STAR

Even in countries not machine-minded, "Collins" is a name to conjure with among users of the machete

A MAN who helped clean up the export mess after the last war suggests a route to lasting friendship with Latin-America

THE UNITED STATES is spending millions of dollars wooing Latin-America. There have been loans, some for defense, some with the faint aroma of the boondoggle. There have been subsidies—the coffee quota that doubled the price to the American importer, for instance. There have been almost outright gifts to Mexican silver producers—now happily no longer necessary since the open market price is above the Treasury's 35 cents—and the southbound stream of good will ambassadors has put many dollars in circulation.

This spending program has two goals:

First, to impel our Latin American neighbors to align themselves on our side and against the Axis.

Second, to stimulate post-war trade.

As for the first, there is no doubt that our dollars have been a factor. It is even conceivable that, in some cases, they were the determining factor. There is a Spanish poem which says "*Poderoso amigo es don Dinero*" (A powerful friend is Mr. Moneybags). However, I doubt if South America could actually be bought by our millions. My own opinion is that the Latin-American nations ranged themselves on our side primarily because they felt that their



SCREEN TRAVELER FROM GENDREAU

If we are to spend millions anyway, we should spend some advertising American quality in Latin America

political independence would be precarious if Germany ruled the world and because they instinctively recognized that justice and right were predominantly on our side. I imagine that self-esteem played a part, too. Latin Americans are inclined, rightly or wrongly, to have a slight inferiority complex as opposed to the *Yanquis* and it pleased them to have us court them as equals.

As for the second purpose, I am convinced that much of our money is being wasted. At least it could be better spent.

Having suffered from the ingratitude of many Latin American importers after the last war, I have little confidence that customers who patronize American exporters today will stay with them after the war merely because they receive fair treatment now.

Price has always counted ahead of quality in the Latin American trade, at least in consumers' goods. Put before a woman a piece of American bleached Canton flannel and a similar piece of Japanese goods at a 40 per cent lower price and she will take the Japanese article every time. The shopkeeper may know that the Japanese cloth is made of short-staple cotton, loaded with sizing, and will wear

Good Neighbor Policy

By EMERSON HINCHLIFF

only a fraction as long as the American, but he is not going to bother to point this out to the woman. As he would say, why should he "*gastar saliva*" (spend saliva) trying to push American goods? He will sell what the public demands.

For this reason, if we are to spend millions anyway, we should spend some of them in educating Latin America to appreciate and demand American *quality*. With American wares having, for the duration, a practical monopoly in the Latin American market, except for what they can make themselves (which is considerable), people are going to be forced to use them. They can thus see for themselves how well American products last.

A revolution in stockings

OUR advertisers, publicists, commentators, Nelson Rockefeller, State Department men, export travelers, everybody, should support these practical demonstrations of American quality. They should encourage people to observe how long American goods last and to realize that, in nine cases out of ten, the American article is cheaper in the long run because it gives better service. If the consumer gets the idea, the storekeeper will fall in line.

I still remember what a Montevideo textile importer told me years ago. He said he had once stocked some Pepperell drill but it was so expensive that he could not sell it. Needing drill for some purpose in his own household, he took the Pepperell home. It lasted some fantastic length of time—20 years, I think it was. He "just couldn't wear it out." I happen to know, as well, that American stockings in 1915-16 revolutionized Latin American ideas as regards hosiery quality. Before that, stockings were made in Germany of cotton yarn, heavily mercerized. They had a lovely crackly feel but people never even tried to wash them; they bought a new pair when the old ones wore out. When people saw that American hose could actually be washed, the German type died and stayed dead.

For years, too, our southern friends



EWING GALLOWAY

British textile makers can change looms to make special widths and patterns for South America. If we can't, we can tell them why

Like their American sisters, these girls hunt bargains. They bought American stockings after finding they lasted longer

FOTO. ARIAS



have seen stamina and durability at work for them in American autos, agricultural implements, sewing machines, radios, typewriters, cash registers and in numerous other articles in which the American product dominates the field. Even in countries not machine minded, "Collins" is a name to conjure with when it comes to the lowly but indispensable machete. In firearms they have adopted the English word rifle (pronounced *reeflay*) verbatim, if, indeed, they do not just refer to their *winchester*, with a small "W," indicating that the word has become a common noun.

Others must live, too

WITH this beginning, it should not be difficult to convince the average citizen that we Americans are a practical race, that we demand quality, that competition is so great that we get it: Ergo, if they buy our mass-produced articles, into which quality has been built to satisfy the American consumer, they are pretty sure to get merchandise that will surprise them by its durability.

Japanese will. This complaint is in cold storage now, but it will appear again after the war when world competition revives.

It goes on several false assumptions. One is that we should even hope or try for a monopoly in export trade. Other industrial nations have to live, too, though we should strive for our fair share. A lost order is not a national disgrace. We can try again; try to get the customer to accept our style, size, or width, doing it courteously, avoiding any intimation that the customer is just plain dumb if he doesn't do as smart Yankees do.

If the buyer remains unconvinced and a shade resentful that *we* don't change to suit *him*, our export travelers should explain that it is usually economically unsound for American manufacturers to make special styles, sizes, and widths. Our whole manufacturing success is built on finding an article for which there is a large demand and then mass-producing it. Usually this calls for the invention and building of special labor-saving machines. Frequently, if a change were

special products that he would not be doing his customer a favor.

Manufacturers in other countries do not face that problem. In the textile field, for instance, the Lancashire manufacturer usually has plenty of skilled help to change over a loom. He has had for many years a surplus of looms, so he neither minds the loss of product from an idle loom nor the relatively small amount involved in wages when a customer demands unusual widths or patterns.

We need to explain those things. We need, in Latin America, smart salesmen who will go over their lines and the customers' lines trying to find something staple with us that the customers, by perhaps a small change in methods, can use. Such a salesman can then show the customer that he is getting the benefit of American mass production and quality at the moderate price that such production allows. Textile salesmen, for instance, might well spend a good deal of time going through American factories so that they could give a well grounded explanation when Latin-American garment makers ask why they should adopt American widths and weights of materials.

This is not to say that our manufacturers should be entirely hardboiled and unimaginative. Some kinds of machines can be switched over with relatively little trouble and expense. In that case it is stupid to refuse an order just because it is small, "it's out of our line," or "we've never made it before." A small initial order may develop into a large repeat.

Give an explanation

THE whole thing boils down pretty much to a question of relationship between the traveler, or export representative, and his manufacturer. The salesman can first try to sell his staple article. Say he fails. If he knows his manufacturing processes, he can then figure out how, by the least possible modification, he can meet or approach the customer's requirements.

The manufacturer should then try to quote on this modified article. If he simply can't, the salesman should accept the decision with good grace—this is difficult, I know—and should assure the customer that refusal does not mean lack of *buena voluntad* (good will). The man who suffers most of all, I should say, is the salesman, whether he be a direct traveler or a local agent. It is

(Continued on page 110)



American automobiles run with American gas. We have already shown that our machines give service. We need to prove other goods do the same

In addition to stressing American quality, this educational campaign should also answer another complaint which is frequently voiced by "experts" who return from a three-week flying tour of South America.

These critics declare, in accusing tones, that American manufacturers won't make the styles, sizes and widths that the export markets call for, where-as the English, Germans, Italians, and

desired, these machines would have to be discarded or rebuilt.

Even if the machine could be modified, the change would mean stopping the machine, paying a high-priced mechanic to make the adjustments, perhaps running the machine only a few hours to make the small quantity required, then changing it back again. It simply wouldn't pay. The manufacturer would have to charge so much for the

New Customers—New Styles

By SHIRLEY WARE

THIS COUNTRY has a brand new customer.

The furniture maker discovered him. Although war divided that industry roughly into three groups—

Those who could convert completely to making such things as plane parts and gliders,

Those who could divide between war production and civilian customers,

Those whose physical set-up prevented conversion—

the companies almost as a whole have kept their lathes turning.

Secret is cooperation, redesign and—the new customer.

He is the war worker.

The Kroehler Mfg. Co., Naperville, Ill., authorized a survey—made its finding available to the rest of the industry—to find out all about him. They learned that he lives in a house of two to five rooms, has frequently moved 100 miles (at least half of those in survey moved 50) to take his new job, needs new furniture of a specialized type. The industry designed it for him. Chief changes are scaling down size of pieces to fit smaller rooms, making chair seats roomier, and all furniture stronger because war workers are generally husky.

Other problems were conquered as encountered. Lacking metal for hardware, they built drawer pulls into the design; lacking steel for springs they designed mattresses and upholstered pieces to use strips of flexible wood and tufted felt. Many contain pockets for springs to be inserted later.

Labor shortage was not a serious problem. Average furniture worker is older than average employee elsewhere and women workers found furniture employment congenial even before the war—woodworking is clean and materials not too heavy. In some planing operations, upholstering work and matching veneers they outdo the men. One firm, Thomasville Chair Co., High Point, N. C., has policy of hiring wives of men already employed, has more applications than jobs.

Accompanying box gives the furniture industry's condensed picture of the war worker as a customer. For their interpretation of his needs in comfort, beauty and style, turn the page.

The New Customer

WHAT the furniture industry found out about war workers through 1,300 personal interviews in 18 different government and private housing projects:

Moved more than 100 miles to present location	33%
Moved more than 50 miles to present location	50%
Lived less than three months in present homes	50%

(Practically none has lived more than 11 months in present home)

	Living in Government Projects	Living in Private Projects
Average age of family head	31	39
Average weekly wage	\$40.97	\$45.26
Average family size	3.53 persons	3.4 persons
Average rent	\$30	*
Plan to make present home permanent	39%	90.4%

*98 per cent of those living in private housing projects are buying their homes.

Bought some new furniture	59.8%	44.6%
	(About 25 per cent all new)	(About 8.3 per cent all new)

Plan to buy later: 23 per cent. Living room suites and bedroom suites lead the contemplated purchases. Of the new furniture that has already been bought, 47.4 per cent was modern style. Fact that those interviewed preferred modern to all other styles—Colonial was a distant second—indicates that they are ready and willing to accept new and different things.

Dealers find war workers to whom they have sold have been good credit risks.

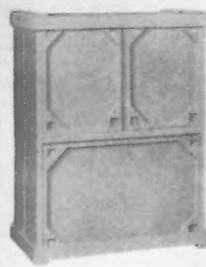
The New Styles . . .



Furniture that can follow the migrating worker from place to place. The bookcase-secretary, shelves removed, is shipping case for the tabletops. The chest, with the table legs in the lower drawer, completes the case



When wire went on the critical list a lamp manufacturer used figurines made up for lamp bases as pedestals for glass top tables



War workers are husky fellows who like big chairs but room dimensions in their homes are small. Chairs like these were designed for strength and comfort but actually occupy little floor space



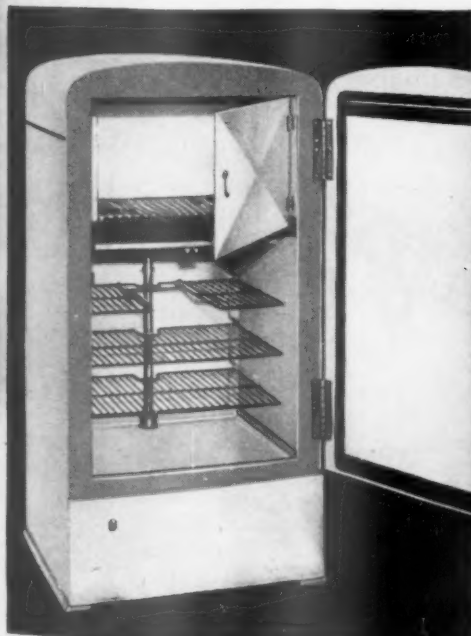
Metal once used in drawer pulls is now a critical material. Furniture makers met the situation with new models in which the pulls are a part of the design

Dinettes in housing projects are usually living room alcoves. This drop leaf table and chair set was designed for small space



HEDRICH-BLESSING

This ice chest is masonite with plastic trim and a wooden door. Baked enamel finish simulates metal now unavailable



Denied wire springs, furniture companies adapted springboard principle for use in upholstered pieces. Wood slats have scientifically controlled flexibility, are convex just enough to give desired resiliency



GRAPHIC PHOTO SERVICE

Mattress and springs travel in a packing case that turns into a bed. Back of the case attached to frame forms headboard and footboard, crating strips are slats. Completed bed may be upholstered or decorated

The Yardstick Becomes a Scepter

By T. N. SANDIFER

IF THERE were an Emily Post guide for legislators—a sort of last word authority on the right way and the wrong way to legislate—this authority would undoubtedly turn a freezing eye on any bill which, in this time of national trial, carried still another threat to the American system of private enterprise, while that system was too busy making guns and tanks and—with those in the smaller brackets—paying taxes to fight back.

Yet, at just this time, when the first thought is to win the war, then for business to get back to its real mission of making goods for the American way of life, and making jobs to buy those goods, comes just such a piece of legislation—the Smith-Bone bill. This is ostensibly a public power measure; furthermore, it applies initially to public power in the Pacific Northwest, built around the Bonneville Dam and corollary power projects.

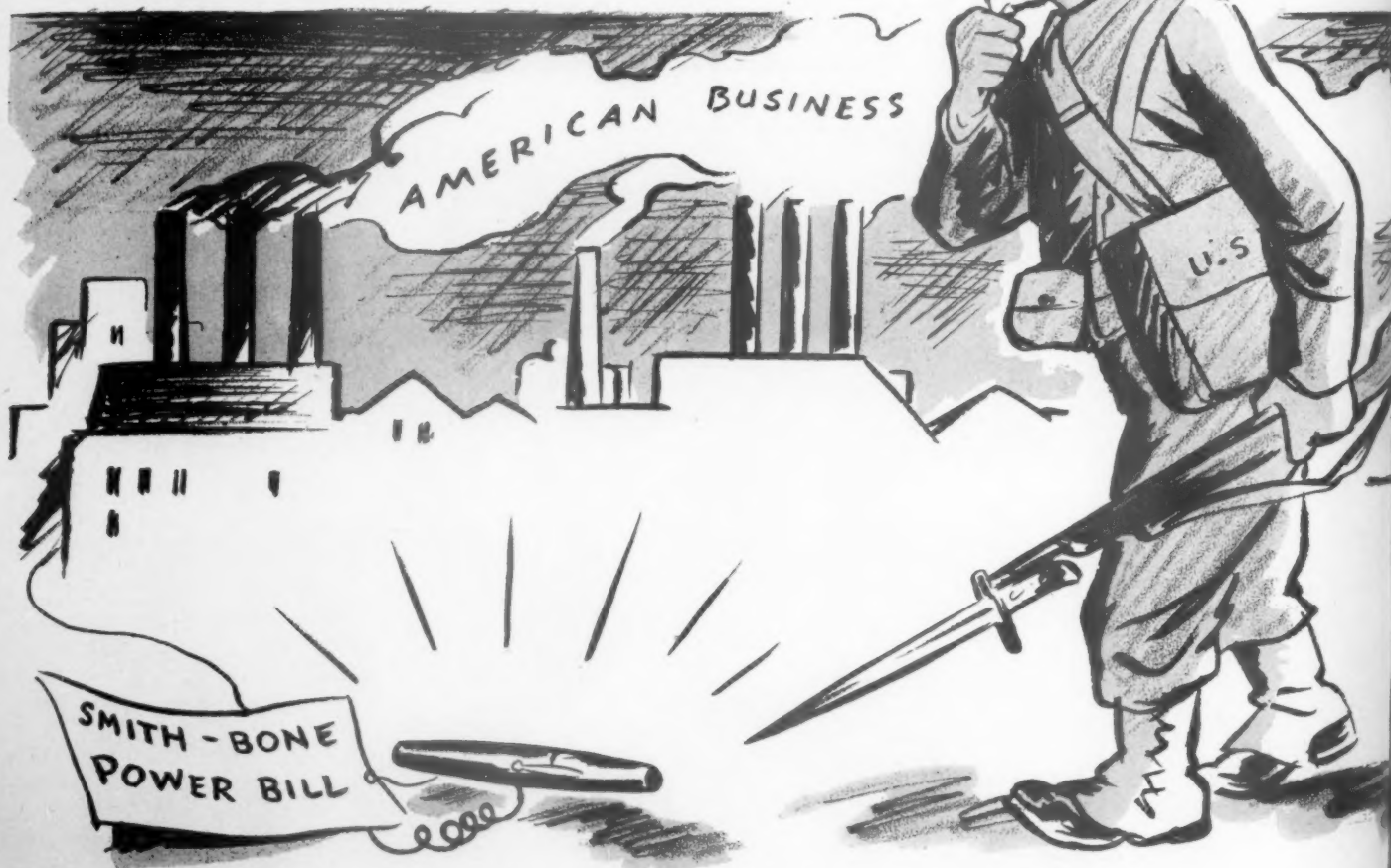
WHILE business gives up old rights, better to carry on the fight for freedom, Congress receives a bill which would end one industry's freedom forever

Ordinarily, even in Washington, nobody concerns himself too greatly about public power legislation. This Administration is public-power-minded, and a number of expensive programs in this field are under way. But here is a bill that carries one back to the "100 days" of the early New Deal, when Congress just received bills from the other end of Pennsylvania Avenue and voted them into law.

Since then Congressmen have learned to eye such bits of law-in-the-making more carefully. They have learned

that seemingly innocent legislative proposals have a peculiar similarity to one of the deadliest inventions of modern war—the "booby-trap."

This is the name, as war veterans will recall, given to stray fountain pens or
(Continued on page 100)



Like the "booby traps" left by retreating armies—innocent appearing objects which set off explosions when touched—the Smith-Bone power bill has dangerous possibilities

CHARLES DUNN



U. S. NAVY PHOTOGRAPH

Although the Navy believes that "too much play would make Jack a dull boy" music, sports, motion pictures and libraries offer varied recreations

World's Toughest Fighting Man

By HERBERT COREY

THE NAVY exists only to win battles. From the youngest "Boot" to the sternest Admiral, its present personnel is drilled to win them

THE NAVY is tougher physically than it has ever been. It was always tough physically. The aim is to make the 500,000 Navy men—that total does not really mean anything; no one knows how many men will be in the sea service before the war ends—the finest body of fighting men in the world. The Navy knows that the tougher a man is physically the finer is his spirit and the more enduring his courage. In the Blue Jacket's Manual he will read that:

The only object of the Navy is to win battles.

The Manual amplifies this. Under the



WIDE WORLD

The Navy can't use slow-thinkers or sullen men. Too much is at stake

subhead of "Fighting Spirit" the recruit is told that:

Without it you are only a human biped who wears pants.

The young man enlists when he is 19 years old on the average. Eighteen years is the minimum acceptable age, although he may come in under 18 if his parents consent. A man more than 27 is likely to lack the resilience and snap required although men over that age are taken in certain special classes. The recruit need not be an athlete but he must be normally fit. Given the material, the Navy will make him what he should be. No one knows precisely but the chances are that he comes from a farm. There is something about



The food is filled with calories, it is well cooked, the kitchens are electrical and clean, the men serve themselves on the cafeteria plan

tailling a double shovel plow between rows of Middle Western corn on a steaming summer day that turns the young man's thoughts toward the open sea. Many have never seen a body of water wider than a creek when they first sign up. The latest available figures show that about 20 in 1,000 are foreign born, coming from about 80 countries. More than one-half of these have been naturalized. Every man in the Navy is a volunteer.

The states providing the greatest number of native born are:

New York	12,299	California	7,480
Texas	10,080	North Carolina	7,262
Pennsylvania	10,025	Alabama	6,578
Illinois	9,200	Tennessee	6,490
Ohio	8,676	Georgia	5,655
Missouri	7,801	Michigan	5,570
Iowa	7,690	Kentucky	5,436
Massachusetts	7,573	Kansas	5,214

Nothing in that table supports the theory that the farms provide a majority of the Navy's men, because the recruiting offices are all in cities, and each state in the honor roll has one or more sizable cities. Supporting evidence may be found, however, in the fact that a publicity campaign recently aimed at the non-urban areas met with immedi-

ate success and in the impression gained by officers connected with personnel that only a small proportion of the recruits look as though they came from the cities. The men from the farms are better specimens physically, because they have been better fed and have worked harder. That inequality is soon ironed out. The men from the south:

Have a more fanatical fighting spirit.

A guess at the reason is that the man from the South has heard about war all his life. Grandpap fought in the war between the states and his father was in the Mexican War. His own father played his part in the First World War. Going to war seemed a part of the young Southerner's heritage. Talk in the Middle West has been colored more by crops, railroads, prices, politics and uplift. Recruits from the East and West coasts know something of and like the sea. The Southwesterner is an adventurous cuss. The recruit weighs about 140 pounds and is about five feet eight inches tall. This is under the Army average, because of the lower average age in the Navy.

The Easterners are the plumpest, the Southerners are gaunt, and the West

Coast men and those from Texas are taller. The man must prove good character and intelligence. The Navy does not want bad boys or dumbbells. Naval discipline is far more rigid than that of the Army. Commands must be obeyed instantly and accurately. A slow thinker or a sullen man might be a great peril under some conditions.

A battleship is an intricate piece of mechanism. It is filled with gadgets of every sort from the gyrocompass which must have its personal attendant to the shell lifts and fire controls. The men who handle them must not merely know all about them but must know what to do in the midst of the blackest night if something goes wrong. The 19-year-old cruiser *Marblehead* was bombed in the battle of the Java Sea. The bomb struck just forward of the No. 1 fire-room and did things to engines and boilers and the blowers and the steering engine and the generators and pumps. The heat of the explosion was somewhere near 2,000 degrees Fahrenheit. Many lights were out. The old cruiser's rudders were jammed and she steered in circles;

"Get going," ordered the chief engineer.

An Epic of the Sea

PERHAPS that is not nautical language but, whatever words he used, the Black Gang understood him. There are no actual Black Gangs in the Navy now, because there are no more coal-burners—oh, maybe one or two old craft—but the men who used to be the Black Gang could not see each other in the No. 1 fire-room of the old *Marblehead*, but they all knew what to do. They did it by touch and inspiration. Days later she steamed into port—steering by her propellers—and was coopered up to go back to sea.

The Black Gang could not have done what they did if they had not known their ship to the ultimate fraction of an inch, and if naval discipline had not held them to their duty.

When he enlists the youngster becomes a Boot.

This is not a term of derision, contempt, or affection. It is merely a term. The Boot is entering upon the two or three or four hardest weeks of his life. He is away from home and mother, perhaps for the first time. He does not like the food. The Navy's food is the best ever cooked in kettles. High-colored praise, but not an exaggeration, if it is understood that the feeding of men in masses under conditions that often approximate fried hell is being considered. The food is filled with calories, it is well cooked, the kitchens are electrical and clean—and the men serve themselves on the cafeteria plan. They eat all they want.

But—

The Boot does not like it. If he came from the South he wants middlin's and hamfat and yams and co'n bread and biscuits and gravy and greens and dunking. All of these things are good, even admirable, but they are not as indispensable as the young man from the South thinks they are. Human life can be sustained on steak and potatoes and fleet bread and ice cream.

We are not picking on the young Southerner. Men from all the other parts have their idiosyncrasies. Something of the Boot's distaste is due to an ingrowing homesickness. No Boot would ever admit it but many of them have cried themselves to sleep on many a first night.

The young man has been put into his new uniform. If it does not fit precisely that fault will be corrected later. No one manifests any particular interest in this at this period, however, because the Boot may be fitted to his uniform in the next few weeks, rather than the reverse. When he first joins up he may have been a handsome chap in his civvies but in mass he is pretty terrible. The faults of posture and the occupational discrepancies of his muscles stand out. The scholar has rounded shoulders, the soda jerker has a stance of his own, the strong farmer has plenty of muscles in places not favored by the garage worker, the young man who

has exercised regularly in a Y is so erect that the others look like slouches. Some of them are below par even if they are normal physically:

"Some of 'em smell bad," said one frank officer.

Some have braced themselves for the new life with cheap whisky, some are full of ill-digested food, some are this and some are that. When they have passed the physical and have been accepted and shower-bathed—the Navy thinks that wallowing in a tub is not too sanitary—and the civilian clothes have been packed and sent home and they have been taught to march in a sort of a formation they are given the strength tests. This is the overture to life in the Navy. The Navy wants to know how strong is each recruit in order that his future training shall be conducted intelligently. Remember that the Navy's goal is to produce the best fighting man in the world, filled with the capitalized Fighting Spirit.

His specialist instructor puts him through a series of tests. He chin-ups on a horizontal bar until he can chin-up no more; he rests; feet under a bar, hands clasped behind head, he sits up and then he returns almost but not quite to a prone position; "his body must not touch the mat until he has done this exercise as many times as possible"; he rests; he does a standing

broad jump; lying face down, he raises his body by pushing with his hands, keeping his back and legs straight. Elderly gentlemen who have spent hundreds of dollars in commercial gyms will recognize the value of these exercises. They will maintain, also, that any greenhorn who can do them is a good man.

Here is the record of the recruited greenhorns:

"The upper limits of the lowest 30 per cent of scores," was six chin-ups, 13 push-ups, broad jump 73 inches, 14 body levers. By a system of computation this rated the Boot as 44 in strength. The men making lower ratings were sent to squads in which especial attention was paid to them to add to their strength, take off excess fat, put on more poundage when needed. Any amateur of strength tests will recognize that the low-rating men, the "lowest 30 per cent"—have made a pretty good showing. When they have progressed sufficiently to become a part of the regular drill squad, they will discover that physical training in the Navy is unlike physical training in any other military force in the world, bar or include—use either verb—the Marines.

In all the other military forces, the physical training has been conducted
(Continued on page 94)

Even aboard ship, keeping-fit exercises assure the Navy that its men will fit their uniforms and constantly keep in mind the admonition to "suck in—square—straighten—pull in"



PRESS ASSOCIATION

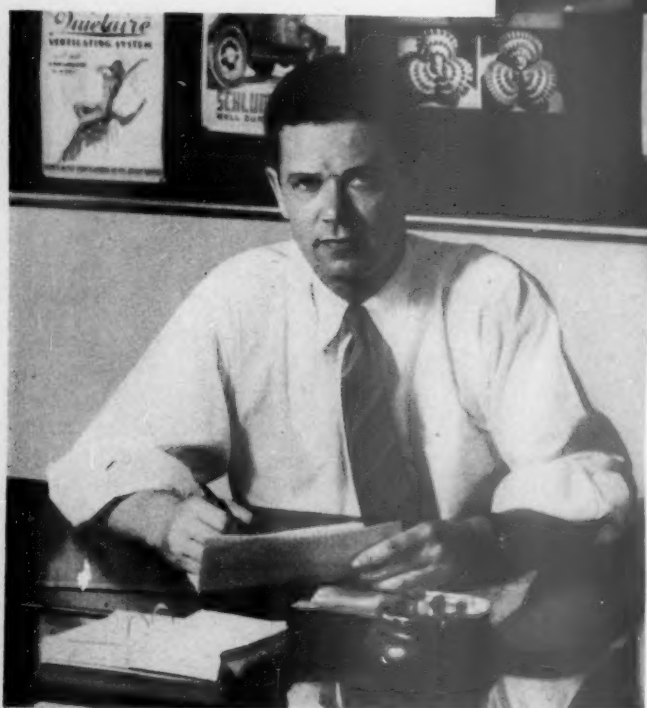
The Navy Liked His Etchings

By CHARLES N. TUNNELL

PHOTO-ENGRAVING seemed to have little place in war but Rogers wanted to help. If you feel the same way—



A workman inspects a few of the many plates which the Art Engraving Company produces for the Navy every day



MERCHANTS PHOTO SERVICE

Evert Rogers thought there must be something he could do. There was

"THERE ought to be something a photo-engraver can do in this war production program. We've got cameras, equipment and skilled workers—"

Evert Rogers was thinking out loud. The time was mid-December, 1941. Big firms and major industries were already converting to war production. Small business owners, too often, were anxiously waiting for the Government to classify and catalog their plants so that they might do what they could.

Rogers was not the waiting kind.

Had he been, he would not have owned the Art Engraving Company in Houston, Texas. Probably he would not have been in Houston at all. It's a long way from Belleville, Ill., where Rogers was born in 1910, and where he earned his way through school by clerking in grocery stores, playing saxophone in a local orchestra and handling radio work for a department store. In those days the store sold radio parts and Rogers built the sets, thus exercising an aptitude for tinkering that today is

contributing its bit to America's war effort.

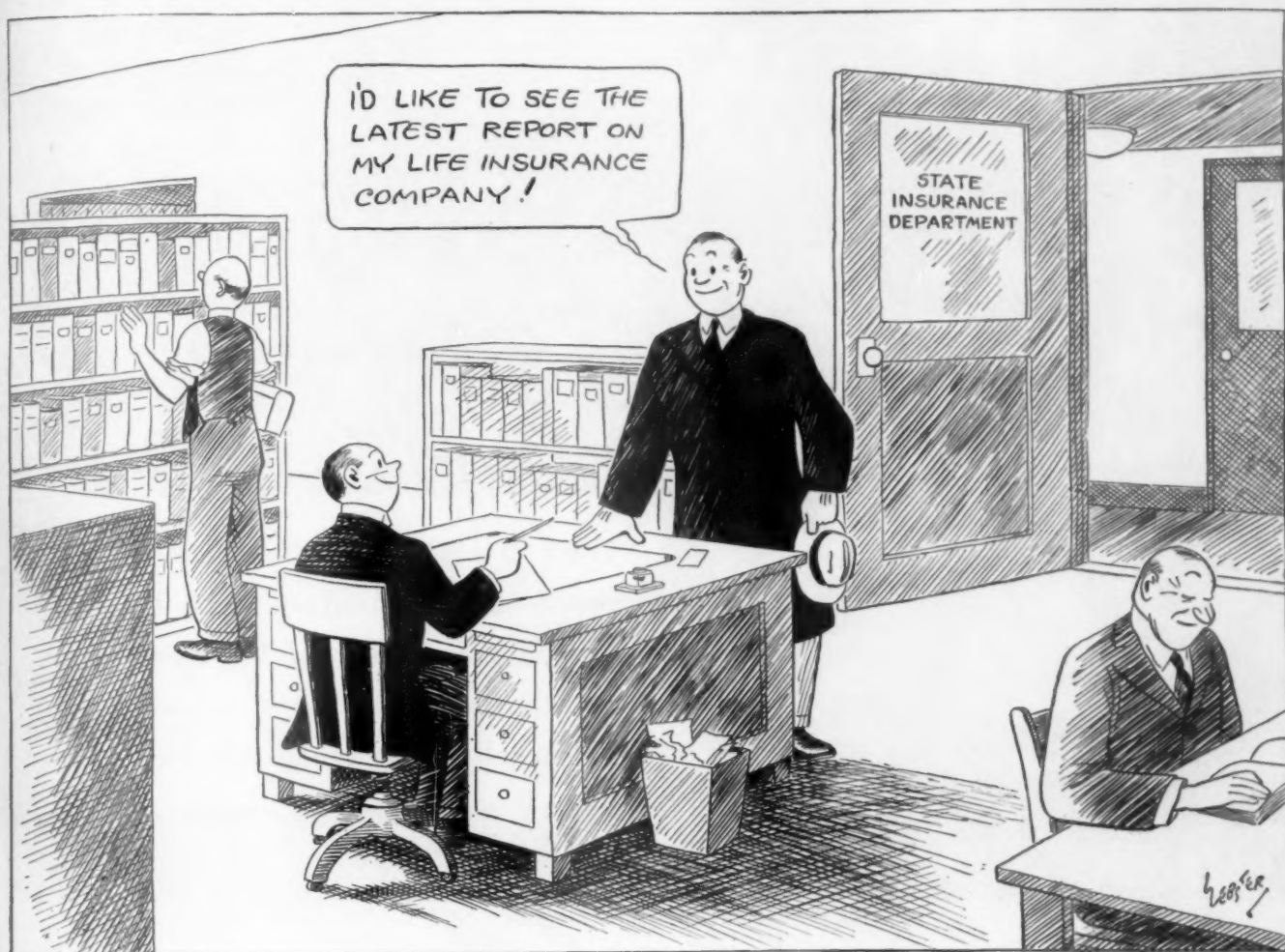
Finishing high school, he spent a year at Illinois College and another at David Lipscombe school in Nashville before going to work for the Phoenix Electric Engineering Company as a field man doing surveying and high line installations through Florida, North Carolina and Tennessee.

In 1931 he reached Houston with an advance crew sent to build a substation for the Houston Lighting and Power Company.

About that time former President Calvin Coolidge was writing, "The country is not in good shape."

That thought impinged itself on Rogers, too. By the time the sub-station job was done, the depression had grown from a pup into a full-grown wolf, engineers were a dime a dozen. When the crew moved to Louisiana, Rogers stayed in Houston, taking an office job

(Continued on page 88)



Where does this happen except in a Free Country?

LIFE INSURANCE thrives only where men are free to plan their own futures. About 70% of all the world's life insurance is owned today in the United States, where life insurance is truly a servant of the people.

►As a protection for its citizens, the laws of each state require that its insurance-supervising officials shall examine into the financial condition and business methods of life insurance companies of that state. These examinations are conducted at periodic intervals, usually at least once every three years.

The supervising officials also have the authority to examine any company doing business in the state, at any other time that the interests of policyholders require it. They are officers of the State Government and are responsible to the citizens of their state for the protection of the interests of policyholders.

Of course, not every state examines every company, but in order that all the interested states may be represented in the examinations, the National Association of Insurance Commissioners has divided the states into six zones. The insurance commissioner of one state in

each zone is named to represent all the states of that zone when the zone takes part in an examination of a company.

Since Metropolitan is licensed in every state and in the District of Columbia, representatives of all these jurisdictions take part in an examination of Metropolitan.

►After such an examination, an exhaustive report is written, and copies are sent to the supervising authorities of the states, the District of Columbia, and the Dominion of Canada and its Provinces in which the Company does business. At the offices of these supervising authorities, this report is available to all who

care to see it.

You may never meet him, but the insurance-supervising official of your state is a man you ought to know about. He and the members of his department are supervising insurance companies in behalf of policyholders.

It goes without saying that Metropolitan, and other life insurance companies, welcome these examinations and the opportunity to review their affairs with the supervisory officials.

It is only right that life insurance dollars... the most important dollars many men ever put aside... should be safeguarded in every practical way.

COPYRIGHT 1942—METROPOLITAN LIFE INSURANCE COMPANY

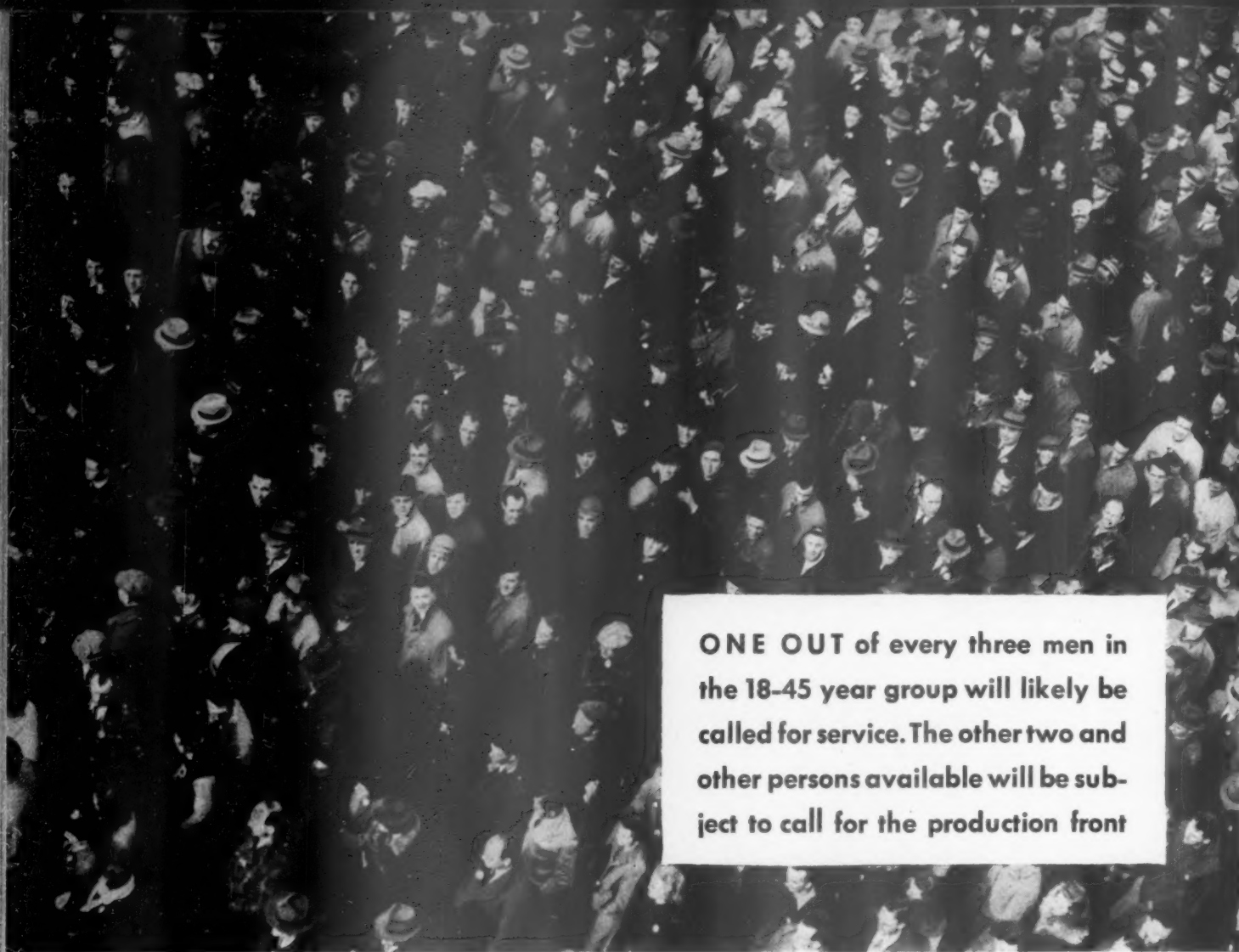
This is Number 53 in a series of advertisements designed to give the public a clearer understanding of how a life insurance company operates. Copies of preceding advertisements in this series will be mailed upon request.

Metropolitan Life Insurance Company (A MUTUAL COMPANY)

Frederick H. Ecker, CHAIRMAN OF THE BOARD • Leroy A. Lincoln, PRESIDENT

1 MADISON AVENUE, NEW YORK, N. Y.





ONE OUT of every three men in the 18-45 year group will likely be called for service. The other two and other persons available will be subject to call for the production front

Uncle Sam Will TAG YOU!

UNLESS all present signs fail, a momentous day that few Americans ever dreamed "could happen here" is coming soon.

On that day, men will be frozen on the job in all essential industries—that means industries like agriculture, mining, transportation and utilities as well as war industries.

What's more, many men from less essential industries will be moved to jobs where they can contribute directly to the war.

When Government controls manpower, the question "What is going to become of me?" becomes every man's first concern.

The next question is:

"Who is going to tell me what to do?"

Other questions coming across NATION'S BUSINESS desks include:

Will I be permitted to stay on my present job?

I have five expert pattern makers whom I could not replace without several years training. Would I be unpatriotic if I asked to have them deferred?

Is someone going to tell me that I have

to go to work in a war plant 200 miles from home?

If I have to work in a war plant, will I get as much money as I'm making now?

If I can get more money in a shipyard than as a farm hand or a miner, why shouldn't I take it?

I am a farmer—how can I increase production if my hired help all leave?

Not all of these questions can be directly answered. Too much depends on "if." If the Russians hold out—if Rommel is stymied—if Japan takes India. Such things will decide the eventual size of our army and the length of the war.

There are other "if's" too. They exist in Government. They are Congress; President Roosevelt; the Manpower Board including the U. S. Employment Service; the Selective Service Board. At present their overall policy is far from clear. Senator Taft is proposing a new draft procedure that would call men according to age and dependents. Congress hesitates to call 18 and 19 year olds, thus particularly obscuring the near future of married men without children. The Manpower Board hesi-

tates to introduce drastic measures such as job freezing without a new National Service Act giving it more authority. Selective Service is criticized because there was no early, iron-bound ruling on calling up married men while single men were still civilians—because local boards were allowed too much autonomy.

Until all this confusion is straightened out, no men except 1-A's can have much idea what may happen to them.

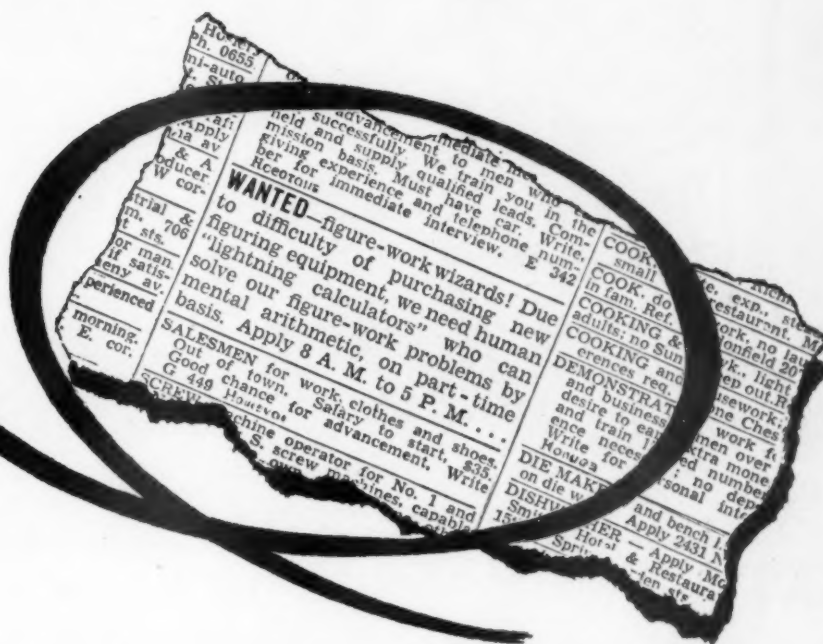
But, the pattern of our effort will follow that of Canada and England. What they have found necessary to do, and how they have done it will, with some adaptations, be a pattern of things to come here.

Canada freezes its manpower

CANADA'S job freezing order went into effect September 1. No want ads asking for help may be run in Canadian papers. No one may change his job—no one can be fired—without Government permission.

The new law puts virtual control of

CANCEL THIS AD!



You can rent Comptometer equipment!

You needn't hire wizards, or hunt up that abacus your missionary aunt brought back from China, in order to cope with increased figure work.

Even though you find it difficult or impossible to purchase new Comptometer adding-calculating machines, you may arrange to *rent* some Comptometer equipment from your local Comptometer Co. for short periods of time.

See your local Comptometer Co. representative — ask him to explain this important service. Or, if you prefer, write direct to Felt & Tarrant Mfg. Co., 1712 N. Paulina St., Chicago, Ill.

COMPTOMETER

REG. U. S. PAT. OFF.

ADDING-CALCULATING MACHINES AND METHODS

all labor, as well as all army conscription, under the Director of National Selective Service who recently told a Labor Convention:

We must eliminate all non-essential work or work which can be avoided by proper planning. . . . Factory space and living accommodations should, and probably will be, expropriated to accomplish this end. . . . An order will be issued making it compulsory for an employable unemployed male person to accept work of high essentiality.

Under the manpower control act, Canadian industry will be classified as to war-time essentiality. Ratings will not be made public, but will be placed in the hands of local selective service officers. The same general yardstick of "essentiality" will be applied both to industrial placement and army service.

The lists are expected to change every few weeks according to the need for men and materials in each category.

Even different plants of the same company have different manpower priorities and farmers will be expected to undertake other war work in slack periods.

The Director of Canadian Selective Service can now determine whether men shall go to the army, to a farm, or to a specific plant. He, of course, delegates much of his power to the local selective service officer. This government official will determine the priority of individual firms in his district, but appeals can be made to special tribunals representing labor, industry and the government.

Canadian officials point out that the law is to be interpreted as a policy rather than an order. They hope to move workers by persuasion rather than force. Care will be taken to see that men are not moved to lower salaried jobs but the law gives no guar-

antee of such action. When men are moved, the Government will pay traveling expenses. If the more essential job pays less than the old, the new man's wages may be increased \$5 a week.

Canadians are great believers in volunteerism. It took them a long time to get around to conscription. Even now the draft does not apply to married men. Only 350,000 men between the ages of 20 and 40 were eligible for conscription, but the army now has 500,000 and is still growing. Privates receive \$1.30 a day.

British experience

ERNEST BEVIN, Great Britain's Minister of Labor and National Service, declares that he has complete power to put any man or woman on any job at any place where he thinks they will do the most good. No worker in any industry contributing to the war can be released and no one can change his job without permission of a local national service officer. A district tribunal made up of an employer, a trade union man and an independent chairman hears workers' appeals. If neither party is satisfied, Bevin's office hears the case. Such appeals average less than 15 a month.

No dependency recognized in British conscription

MEN are drafted for the British army according to age groups—no deferment is permitted for dependents. The only excuse for avoiding military service by an able bodied man is essential occupation and even then it depends on age. For example, an engineer or electrician could not be called if he was more than 25 or a shipwright more than 30. The age limit varies according to the Army's need of men and the industry involved. Beginning January 1, 1942, age reservations for all key industries rose one year each month. Thus the limit may have been 25 for engineers in December, 1941, 26 on January 1, 27 on February 1 and so on. By June 1, the reservation had disappeared entirely for men in distribution trades, footwear, journalists and engineers on non-vital work up to 40 years old. There are various exceptions, but by and large the Act is administered under those specifications. In a few cases the age limit was lowered to meet the need for workers in essential war work.

Anything may be an essential industry—London hotel, for instance. Some hotels must operate. Such cases are considered individually.

The British adopted blanket deferment by industry early in the war to provide labor enough to carry out essential tasks. Workers in such industries as shipyards and aviation were automatically exempt from battle sta-

Estimates of Manpower Requirements

DECEMBER 1940, 1941, 1942, and 1943

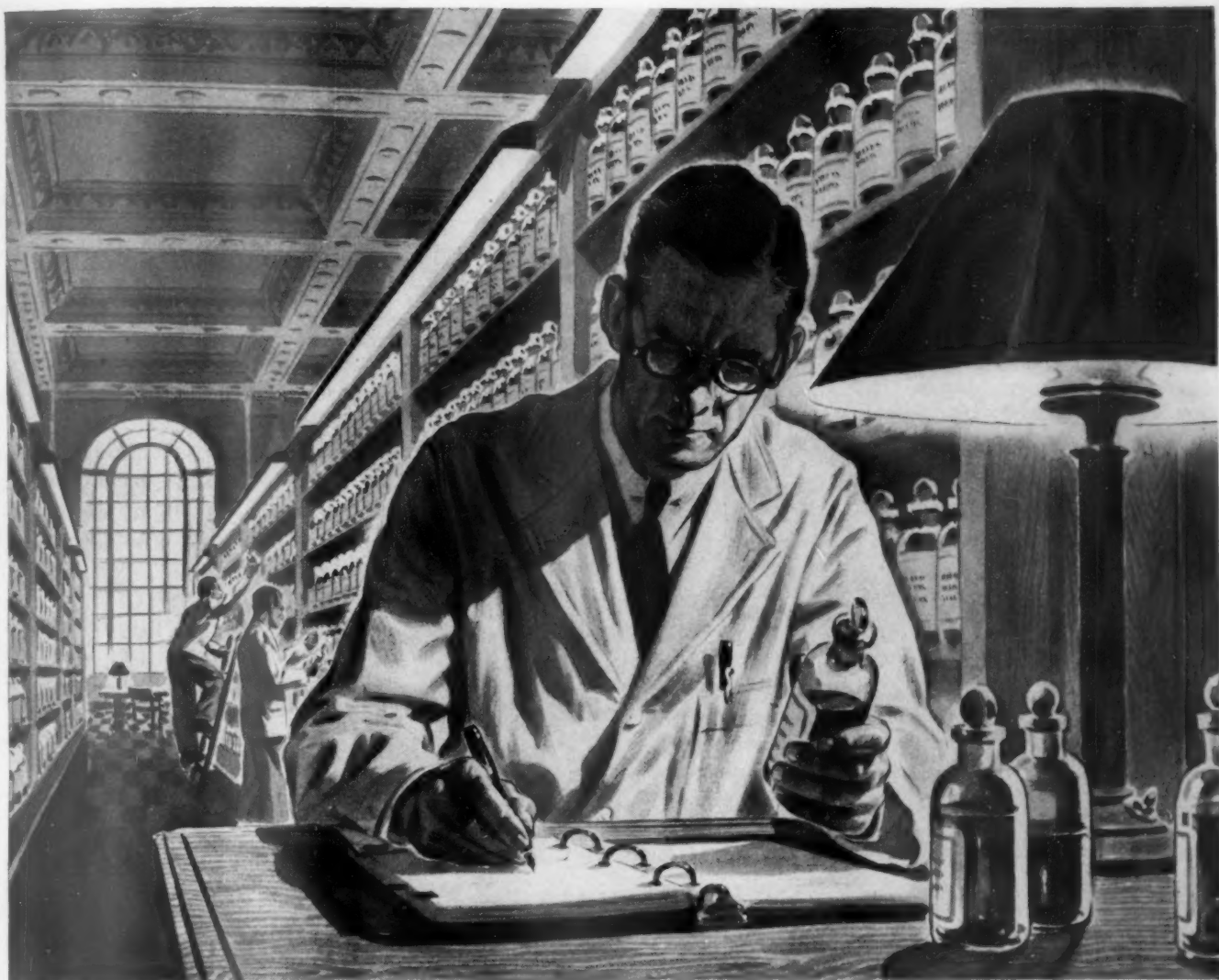
(in millions of persons)

	DEC. 1940	DEC. 1941	DEC. 1942	DEC. 1943
Total Labor Force	54.1	55.4	58.7	62.3
Armed Forces ²	0.9	2.1	5.5	9.0
Labor Force, excluding Armed Forces	53.2	53.3	53.2	53.3
Unemployed	7.1	3.8	2.4	2.0
Employed	46.1	49.5	50.8	51.3
Agriculture	8.6	8.2	7.8	7.5
Nonagriculture	37.5	41.3	43.0	43.8
Self-employed, proprietors and domestic servants	6.0	5.3	5.0	4.7
Employees	31.5	36.0	38.0	39.1
Manufacturing		13.7	16.5	18.8
Mining		1.0	1.0	1.0
Construction		1.9	1.7	1.0
Transportation and Public Utilities		3.3	3.5	3.7
Wholesale and Retail Trade		7.5	6.0	5.0
Finance, Service and Miscellaneous		4.2	4.1	4.0
Government		4.4	5.2	5.6
Nonagricultural employees	31.5	36.0	38.0	39.1
War		1.7	6.9	17.5
Nonwar	29.8	29.1	20.5	19.1

¹ Based on total war expenditures (in constant dollars) at an annual rate of \$69 billion in December 1942 and \$84 billion in December 1943, with corresponding munitions and construction expenditures of \$60 billion and \$75 billion respectively, exclusive of off-shore construction expenditures.

² Unofficial, based on data released prior to December 7, 1941 and statements published since.

SOURCE: Bureau of Labor Statistics; and Bureau of Employment Security, Social Security Board.



The library where books are *bottles*

ON THE outskirts of Louisville, Kentucky, is one of the strangest libraries in the world. Its "books" are bottles. And in them is the greatest collection of whiskey information ever assembled.

For this is the Calvert Library of rare blending stocks. It contains samples of every one of the 151 superb whiskeys, and the 102 mellow grain neutral spirits, from which we select the magnificent Calvert blends. It represents the world's largest reserves of fine stocks.

There is no similar classification in existence . . . and because of it, no other whiskey is just like Calvert.

You see, with the Library's whiskey-lore at their fingertips, Calvert scientists can find the precise combination of qualities for the perfect whiskey. They can choose and match samples for harmonies of flavor and bouquet, for congenial characteristics that will merge into a smooth, delightful blend. Hence the gloriously-rounded flavor, the satiny smoothness, of Calvert whiskeys!

This unique Library is a symbol of Calvert's infinite care to give you nothing less than perfection. It expresses the painstaking skill that Calvert scientists devote to every Calvert operation. And in this un-

compromising ideal lies your assurance that Calvert quality will *always* be supreme.

So, thanks to our Library and all it stands for, you can be confident that Calvert will continue to give you "America's Favorite Luxury Whiskey.*"

Calvert

The Institute
of Blends

BLENDED WHISKEY Calvert "Reserve": 86.8 Proof—65% Grain Neutral Spirits...*Calvert "Special": 86.8 Proof—72½% Grain Neutral Spirits.
Calvert Distillers Corporation, New York City

tions by the age reservation. Thus no one over 21 in a critical industry such as shipbuilding might be taken or allowed to volunteer for the army. But today the British are putting each exemption on a personal basis, depending on whether or not the individual is a key operator in an essential war plant. The decision is made by one of 50 district manpower boards made up of a chairman and four government officers. Appeal rights are granted to both worker and employer. All men up to 50 are eligible for service, but none over 40, except specialists, have been called. The extra ten years was added largely to get more doctors and dentists for the armed forces. No one under 18½ has yet been called to the colors.

British transfer labor to war plant jobs

IT was early apparent that there was not enough labor to man the British war industry machine. The following steps were taken one at a time:

All jobs in the building, electrical installation and engineering industries were assigned exclusively through the government employment offices.

All men of skilled trades useful in war production who had gone into something else were registered and called back into their original occupation.

Government appointed labor supply inspectors to examine industrial plants, advise employers on training and upgrading employees, hunt for workers in non-war activities and urge employers to transfer suitable prospects to war industries. They also estimated the number of skilled workpeople who should be employed in particular plants. Men are permitted to volunteer for transfer. If not enough volunteer, they would be selected jointly by representatives of management and workpeople. It was decided that, if industrial workers labor less than 52 hours or office workers less than 46, personnel could be reduced.

Government and private plant training centers were established. The latter was reported most productive.

The Essential Work Orders which froze workers on the job in essential industries were passed early in 1941.

There still weren't enough workers. Limiting supplies and concentrated production funneled more into war industry, but not enough. Then all women more than 20 and men above 40 were registered with a view to allocating their work. By the end of June all men between 41 and 45½ and all women up to 40 had been registered.

British officials report that little compulsion has been necessary in moving workers. The power to do it seems a sufficient persuader.

In some cases the Government has taken over operation of a complete industry such as longshoremen. Nationalization of the mines is frequently suggested.

Most Britishers are doing several jobs. Air Raid Protective Service workers, who are on a full time basis, prac-

Aircraft production

Production of ships, boats and parts

Production of ordnance (fighting tools)

Production of ammunition and products necessary to make it, such as glycerine

Agriculture

Food processing

Logging and lumbering

Construction pertaining to conduct of war

Coal mining

Metal mining

Non-metallic mining except materials such as stone used exclusively in building

Smelting, refining and rolling of metals

Metal shapes and forgings

Finishing metal products: enameling, lacquering, etc.

Agricultural and industrial equipment necessary to operate plants producing essential commodities

Machinery needed in any phase of the war effort

Rubber products

Leather products needed in military service

Textiles: limited list confined to armed force needs

Apparel for armed forces and work clothing

Stone, clay and glass products for technical purposes such as fire brick and abrasive wheels needed to make military products

Petroleum, natural gas, petroleum and coal products

Finished lumber products such as storage battery boxes, wooden parts of aircraft or ships, wood preservation activities

Transportation equipment

Transportation services

Packing and shipping materials such as excelsior, fruit baskets, containers

Communication equipment

Communication services: telephone, radio, newspapers

Heating, power and illuminating services

Repair and hand trade services

Health and welfare services, facilities and equipment; includes manufacture of materials for medical services, police, firemen, water supply, etc.

Educational services

Governmental service

WORK IN ANY of these industries does not automatically bring deferment. They are listed only as a guide for the benefit of local Selective Service Boards when calling men to the colors. The same list could be used by the Manpower Commission in determining whether or not a man's job is essential to the war effort—if not, he might be asked to move.

tically all double at other jobs. Members of the home defense forces work at regular jobs, drill in their time off. A group of 120 Sheffield bank employees now work Sundays in war plants to give regular workers a day off. A clergyman visiting in the United States, when asked to define a slacker, said: "A middle aged woman who is doing only one job."

British women on the job

A BRITISH official said that successful application of such a regimented program depended upon timing—a step which is unacceptable today may be demanded in a month; premature ap-

peals for volunteers may only lead to frustration.

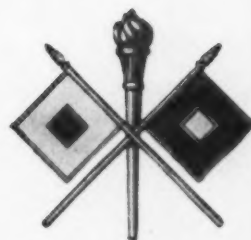
When 23,000,000 out of 33,000,000 persons between the ages of 14 and 65 have been registered for national service, it is obvious that women are playing an important part.

Today, British women are levelling ground on airdrome sites; mixing cement; shoveling coke and loading pig iron into crucibles; assembling radios; operating and setting universal grinders; testing concrete sleepers on railroads; repairing locomotives; working on docks. Some 24,000 are serving on farms.

Aviation plants will soon be 70 per cent operated by women—even engine

COMMUNICATIONS

... directing arm of combat



"Get the message through!" That's the tradition of the men who wear this insignia. Of the 18,000 Bell System people now in the armed forces, nearly 4,500 are with the Signal Corps. Young men can serve their country and obtain specialized training in communications in this great branch of the Army.

...and Western Electric equipment goes to every battle front



Army planes fly and fight with Western Electric radio command sets, which keep the planes of a squadron in contact with each other and with the ground forces.

Wherever American soldiers fight in tanks, they get their orders over Western Electric radio sets—vital in coordinating today's mechanized warfare.



Observers report front-line action to Army commanders over Western Electric field telephones, field wire, field switchboards.

A major source for this specialized equipment is Western Electric—for 60 years manufacturer for the Bell System—one industry with over 70,000 skilled men and women dedicated to

"keep 'em in contact."

Western Electric

ARSENAL OF COMMUNICATIONS





Copyright 1942, The Pullman Company

The man who slept like eighty million dollars

ASK THIS clear-eyed Pullman passenger how he slept last night and he would probably say, "Like a million dollars!"

As a matter of fact, he *could* say *eighty million* . . . for Pullman has invested eighty million dollars, in recent years, to improve the *comfort* Pullman passengers enjoy.

The larger part of this money was used to add many new lightweight sleeping car trains to the Pullman fleet. A good share was used to install air-conditioning in thousands of Pullman cars already in service. *All* of it was devoted to making

rail-Pullman the most pleasant, restful way of going places fast.

These additions and improvements were undertaken during the depression, because of Pullman's deep faith in the American future.

They are reported to you here because the added equipment now helps Pullman maintain adequate service to civilians while doing its wartime job of moving troops.

And the extra comforts and conveniences that make a modern Pullman so relaxing give you who still must travel the *sleep* going that you need to *keep* going as you must.

SLEEP GOING — TO KEEP GOING

GO PULLMAN

KEEP YOUR PLEDGE TO BUY WAR BONDS AND STAMPS . . . PULLMAN EMPLOYEES ARE KEEPING THEIRS!



More than half a million soldiers, sailors and marines *go Pullman* every month. And civilian travel is the heaviest in history. That's why *you* help when you: 1. Make reservations early; 2. Cancel unwanted space promptly; 3. Take only necessary luggage, and; 4. Travel in the middle of the week. Your cooperation will be sincerely appreciated.

Take a Little—Give a Little

SOME NOTES from the casebook of a man who has spent much time settling disputes between management and labor, not by compulsion or pressure, but by conciliation. While accounts of strikes make disturbing headlines, it is heartening to know that hundreds of conferences like those described here are going on every day, finding both sides willing to give a little so that they both may reach the common goal



WE ARE coming into a new world in employer-employee relations. More and more management is accepting the union; sometimes as an unavoidable nuisance, sometimes because it finds and honestly feels that a well managed union is for the company's good.

I've just said well managed and that's an important word. The manager of a considerable industry once said to me:

"We've just had a change in the leadership of the union in our plant and I think we're going to have a much more agreeable and comfortable time in the future. Bill (the retiring President of the local) couldn't keep his men in hand. He could fight me and do a fine job, but he couldn't fight his men. He couldn't make them accept what he thought was fair or to give a little to meet the boss half way. A union ought to be a democracy, but a little dash of dictatorship is handy at times."

★ ★ ★

EMPLOYERS who fear clauses perpetuating the unions frequently take refuge in this:

"Of course, if the Government tells me to recognize the union, enforce membership and collect their dues for them, I'll do it but I won't until I'm ordered to."

Sometimes it helps to put the situation this way:

"If you've got to take castor oil, would you rather do it willingly, or have some one hold your nose and pour it down your throat?"

Most employers appreciate this point of view but one man came right back:

"The Government'll damn well have to hold my nose before I'll take it."



AS A CONCILIATOR, whether single-handed or one of a three man board, settles down and looks at the two groups lined up against each other, he sometimes wonders how long before fists will fly. On one occasion the employer's Labor Relations Council took me aside:

"You've got a good chance of settlement if you keep the president away from the union's representative."

As it worked out, the meeting was unusually peaceful. The lion and the lamb lay down together; in fact they were both lambs.

In another case, however, it wasn't safe to have the two factions in the same room. The poor conciliator had to run from one to the other with proposals and counter proposals like a dismantled Paul Revere.

★ ★ ★

ANY CONCILIATOR soon recognizes that the worker's desire for a wage increase and the employer's unwillingness to grant it may be based on entirely different economic factors.

The worker is attracted by neighborhood competition in wages; the employer is concerned by the scale paid by other units in his industry.

Typical was a situation in a western Pennsylvania plant making specialty glass.

It was in the sphere of influence of the steel mills and the workers had always in mind the high wages some steel workers were making. The employer worried about a competitor in a low-wage area in the South.



A tall, husky workman put his side of the case like this:

"Maybe six weeks ago my kid brother goes to work in a steel mill and yesterday he comes home with more than a hundred bucks. Me, I'm getting a lousy \$72. What do you think my old woman has to say about that?"

Later I had a chance to ask him:

"Why don't you go after a job in the steel mill?"

"Yes? And how long does a steel job last after war-time and what becomes of my \$72 in the wire glass plant? I'm not taking chances. If I didn't have a wife and two kids I'd look at things different."

That gave me a new understanding of why the worker is so concerned with union security coupled with seniority. It's his protection for the future. Wages are important but job safety is above all the most important thing for the worker.



RELATIONS between management and workers are changing. Disappearing (but not disappeared) is the feudal landlord type of employer who felt that he knew better what was good for his workers than they knew themselves. One employer, with men and women workers, wanted to incorporate in an agreement a list of 15 or 20 offenses which he figured were bad for the men's morals and their health. One made love-making in the plant punishable by discharge.

★ ★ ★

THE QUESTION a "Commissioner of Conciliation" (official title) hears most frequently is:

"How do the two sides get along together?"

Ninety-nine times out of 100 they get along like old friends. In fact, frequently, they are old friends. In any large plant there are repeated minor disputes about which the Chairman of the Union Grievance Committee calls the Union's President, and the works manager, too, goes higher up.

Result: the union leader calls the company's President "Bill." The Company President says "Lo, Tom!" And it isn't an affectation of democracy.

★ ★ ★

IS THERE a new type of union leader in our world? I can't be certain; but I am inclined to think so. Certainly I have yet to meet anything that resembled in any way the old-time cartoon of "The Walking Delegate." The union leaders I have met are inclined to be young (the C.I.O. being, for obvious reasons, the younger), quietly dressed and gentle.

They present their cases skillfully in spite of the difficulty they sometimes face in getting information from the employers.

This difficulty presents itself frequently when the union seeks to show that the company is paying lower wages than are common to the industry. The company maintains that its wages are "above the average." Employers are not eager to spread such knowledge to their competitors and even less to their competitors' workers. Union leaders are well up on statistical sources and are quick to call upon the Bureau of Labor Statistics for material to back up their demands.



MEN WILL go to great lengths to keep a business alive. It's a sort of pride in the family name and a desire to see it perpetuated, to carry on the plant that grandfather founded before the Civil War.

I helped in one such case where a young woman was President of a company making heavy castings. She had apparently inherited her father's business capacity and has kept going through the depression sharing work and wages among as many men as possible. Defense and then war had taken her out of the red for a time but ceiling prices and demands for much higher wages by a newly organized and aggressive union had the business facing failure.

Our job was to make the union understand the situation and believe it.

Finally a small wage increase was agreed on. I think she would like to pay more; in fact I think she'd like to be a sort of Lady Bountiful for this small community. If the tide turns between now and Christmas I expect she will volunteer some sort of bonus.

★ ★ ★

IT'S HARD to convince the man in the plant that the boss hasn't plenty of money with which to pay wages. Hasn't he two cars and a big house? And in small communities the rank and file know, with some certainty, what becomes of management's money.

Once I said to a General Manager: "Perhaps they think



you're able to pay larger wages because you live in a large house."

His answer: "Large house? Five rooms, and three children."

★ ★ ★

MEMBERSHIP in a labor union is to the worker largely a means of getting something and the most understandable "something" is a wage increase.

For the union organizer and leader, the union is his job. If the union slips, his job slips. I don't mean to say that the rank and file aren't interested in the organization or the leaders interested in wages. They are, but more than once I've been in situations where it seemed likely that a sacrifice of demands for a closed shop might lead to a somewhat more generous wage offer and *vice versa*. When

(Continued on page 104)



"That's a pretty big hole," Calvin Coolidge said, looking at a mine in the Missabi which turns out more iron each year than Germany has in all Hitler's reign

AL. HEITMAN

A Grand Canyon of Work

By JOHN W. LOVE

IRON mining is America's oldest industry—Jamestown's colonists shipped ore to England in 1609. While the Dutch were in control of New York, they shipped some to Holland. Bog iron was discovered early in Massachusetts and in 1643 John Winthrop and his partners were granted 3,000 acres of land in Braintree "for the encouragement of an Ironwork to be set up about Monotcot river."

Other colonies offered various inducements for iron production, too, mostly in the early days because of the high cost of importing nails. In New England manufacture of nails was a household task.

With a small furnace in the chimney corner, anvil, hammer and iron rod, a

A GOLDEN ANNIVERSARY that worries Hitler occurs in October when the Missabi iron range observes its fiftieth year of production

skilful man could make about 2,000 a day.

By Civil War days iron had been found in almost all the states.

So the handling of iron and methods of getting it out of the ground were pretty well known by the time Leonidas and Alfred Merritt noticed the peculiar behavior of their compasses as they cruised for timber through northern Minnesota. Other men had observed that phenomenon, too, as early as 1830. They weren't interested. Neither were

gold prospectors who noticed it 30 years later. The Merritts were.

In 1890, enjoying one of the periodic spells of prosperity that sometimes visited the family, they formed the Mountain Iron Co., and on Nov. 16 of that year their test party headed by Capt. J. A. Nichols of Duluth found iron under the pine needles. It analysed 64 per cent.

The Merritts embarked upon a campaign to raise local capital. They built the Duluth, Missabi and Northern rail-

FIVE ships a day ★ ★ ★

demands Industrial Teamwork

To attain our shipbuilding goal, Industrial Teamwork must be carried to a point undreamed of in days of peace. Steel plate and structural shapes alone will not create the ocean carriers on which so much of the world's hope depends; the cooperation of all men in all yards is essential to bring production to its highest, record-shattering tempo.

Yet even this is not enough. Industrial Teamwork must be carried *outside* the yards—to the other industries which supply the builders with their stuff of industrial life . . . Both in and outside the shipbuilding areas, Insurance contributes to and unifies Industrial Teamwork.



Insurance Aids Industrial Teamwork

Virtually every part of a gigantic shipbuilding program benefits from Insurance planning. Scientific surveys minimize hazards to plant and facilities. When disasters do occur, insurance dollars become available, permitting early resumption of production otherwise frequently impossible.



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road and got the new properties into production.

It was not an easy task. The powdery fineness of the ore which deceived the early prospectors—who were looking for steeply pitched veins of rocky stuff—also made blast-furnace men skeptical. There is a story that once when 500 tons of it were shipped to Pittsburgh in a windstorm only 250 arrived. The shippers and furnace men, however, learned to mix it with heavier ores and the furnaces built explosion tops to handle it properly.

Our biggest source of iron

ON Oct. 17, 1892, however, the Merritts loaded their first iron at the Mountain Iron Mine. It was consigned Nov. 11, by barge, to Oglebay Norton & Co. of Cleveland—they have the bill of lading framed on the wall. Before the weather closed in, 4,425 tons were shipped.

That was the first production from the giant Missabi—or Mesaba, or Mesabe—range which, by late 1903, was supplying more iron than all other American sources put together.

The Missabi is that mile-wide iron formation or string of beds which lies 55 miles northwest of Duluth and stretches northeast and southwest for nearly 100 miles. In it were 2,500,000,000 tons of iron ore.

This year alone the range will ship 60,000,000 tons—more than Germany has mined in all the years Hitler has been in power.

The story of the growth from the original 4,245 tons to the present flood is woven into the whole background of America's industrial leadership of the past 50 years.

Having solved the engineering and first promotional difficulties, the Mer-

ritts needed money, large hunks of money. Henry W. Oliver, the Pittsburgh plow manufacturer, came up to Duluth and leased the Mountain Iron Mine just after its first shipment, paying the Merritts a bonus of \$75,000. He had interested H. C. Frick of Carnegie Steel a few weeks before, against the skepticism of Andrew Carnegie who was absent in Scotland, and so predecessor companies of United States Steel were into Missabi almost from the beginning.

Others were rushing into the territory, too, including Frank Hibbing. The Merritts may have dreamed of virtual control of the range. Anyhow the panic of 1893 found them overextended. Running out of what it takes for railroad pay rolls, they sought and obtained the participation of John D. Rockefeller, joined their properties with some of his in other ranges, and formed the Lake Superior Consolidated Iron Mines Co.

Rockefeller took bonds for his share, the Merritts kept stock. The banking crisis deepened, they were under heavy obligations in Minnesota and, in 1894, they sold 90,000 shares to Rockefeller for \$10 a share and lost control. Rockefeller subsequently settled with the Merritt family for something more than \$500,000, most of which went to pay debts.

Rockefeller leased his Lake Superior Consolidated mines to Oliver Iron Mining. By that time Frick and Carnegie had acquired the ownership of five-sixths of Oliver's stock. Several years afterward, as United States Steel was being formed, J. P. Morgan bought out Rockefeller at a price which netted Rockefeller many millions. Thus did Big Steel, both through ownership and leases, acquire what is still 79 per cent of the open-pit ore of the Missabi,

and which last year accounted for 54 per cent of its yield.

Pentecost Mitchell, who developed the Hull-Rust mine, became president of Oliver. Other men of those years who are still remembered on the range include W. C. Agnew, who opened the great Mahoning pit; George St. Clair, who opened the Vega at Eveleth; Peter Kimberley and John T. Jones who developed the Biwabik area; and John C. Greenway who was active in the eastern section around Coleraine.

As discovery and development gave way to production, the strategies were mostly directed from Pittsburgh or Cleveland, by men like the Hannas and Samuel Mather. The executives of the range have been of the engineering or professional management type, reporting to offices far away. One such was W. J. Olcott, president of Oliver many years. Frank Webb, who was with Republic Steel, is remembered in Duluth as a jovial soul, and the Webb mine is named for him.

Room for some late comers

A FEW late comers were able to do extraordinarily well, if they were not too late. James Corrigan was one—he and Frank Rockefeller had been foreclosed by John D., in 1894. Corrigan had the backing of Prince McKinney and Judge Stevenson Burke of Cleveland. This group acquired several mines and leased from James J. Hill of Great Northern the property which became the Stevenson mine, to which McKinney so often referred as the "breadwinner." The three built up what later became Corrigan-McKinney Steel of Cleveland and, without them, Republic Steel of today would be of a different pattern.

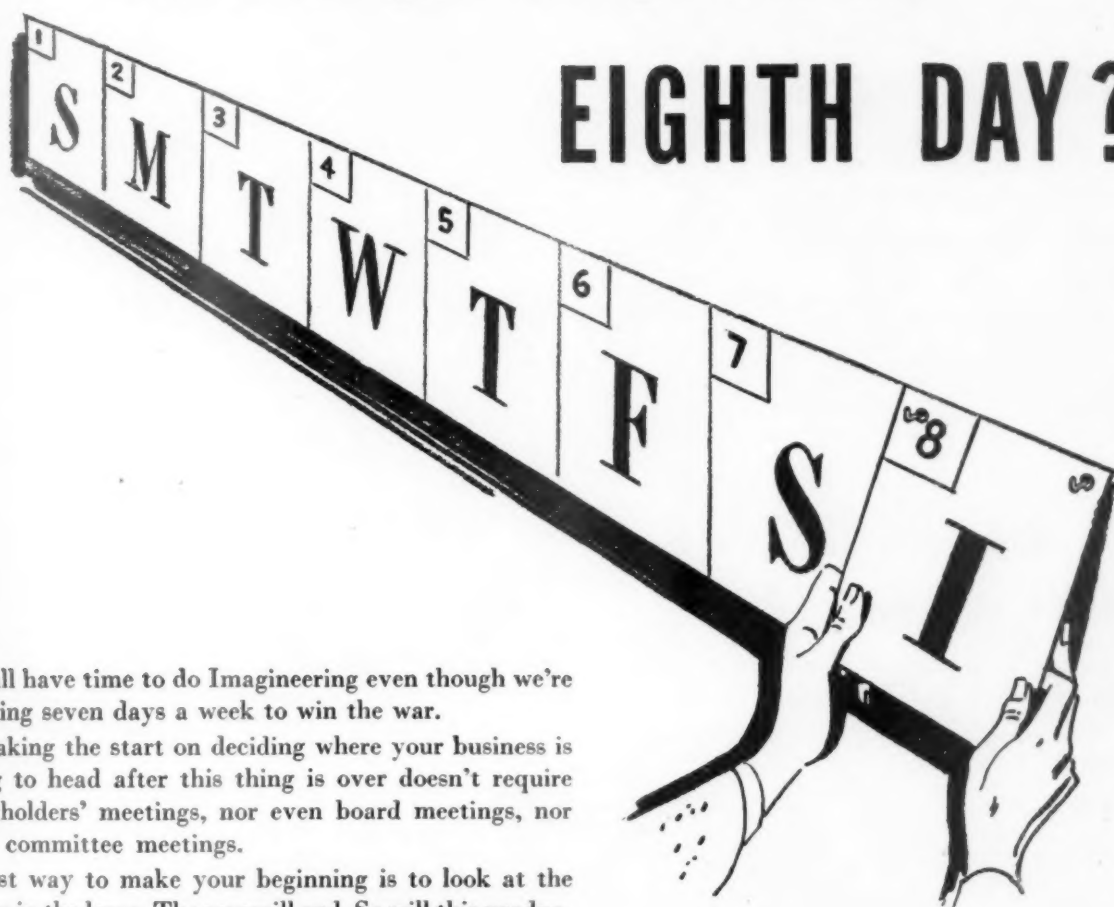
The mining communities grew in
(Continued on page 106)



Towns which started out like this are today show places with \$3,800,000 high schools, \$550,000 Memorial buildings, parks and zoos, all built with taxes paid by the iron mines

CULVER SERVICE

What are you doing with that EIGHTH DAY?



We all have time to do Imagineering even though we're working seven days a week to win the war.

Making the start on deciding where your business is going to head after this thing is over doesn't require stockholders' meetings, nor even board meetings, nor even committee meetings.

Best way to make your beginning is to look at the future in the large. The war will end. So will this production race on war materiel. Millions now employed at that kind of work will need to keep on working at *something* useful. Other millions will come home from wherever, needing useful and peaceful employment.

In the large, therefore, anyone can see that *new things to make* is a prime need for peacetime.

That makes everyone's individual responsibility clear and direct.

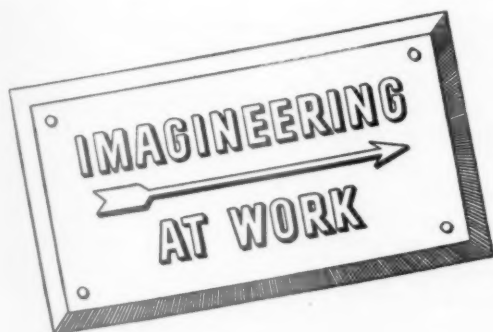
In the eighth day of thinking time everyone has at his disposal, he must produce new ideas for new jobs. He *must* let his imagination soar and engineer it down to earth.

He must, or else—

We believe this deeply at Alcoa. We are using our eighth days that way. We mean that no man shall be out of a job when this thing is over for want of *try* on our part right now.

And if you suspect that some of the results of our future-looking on aluminum would fit into your own Imagineering, let's compare notes for future reference.

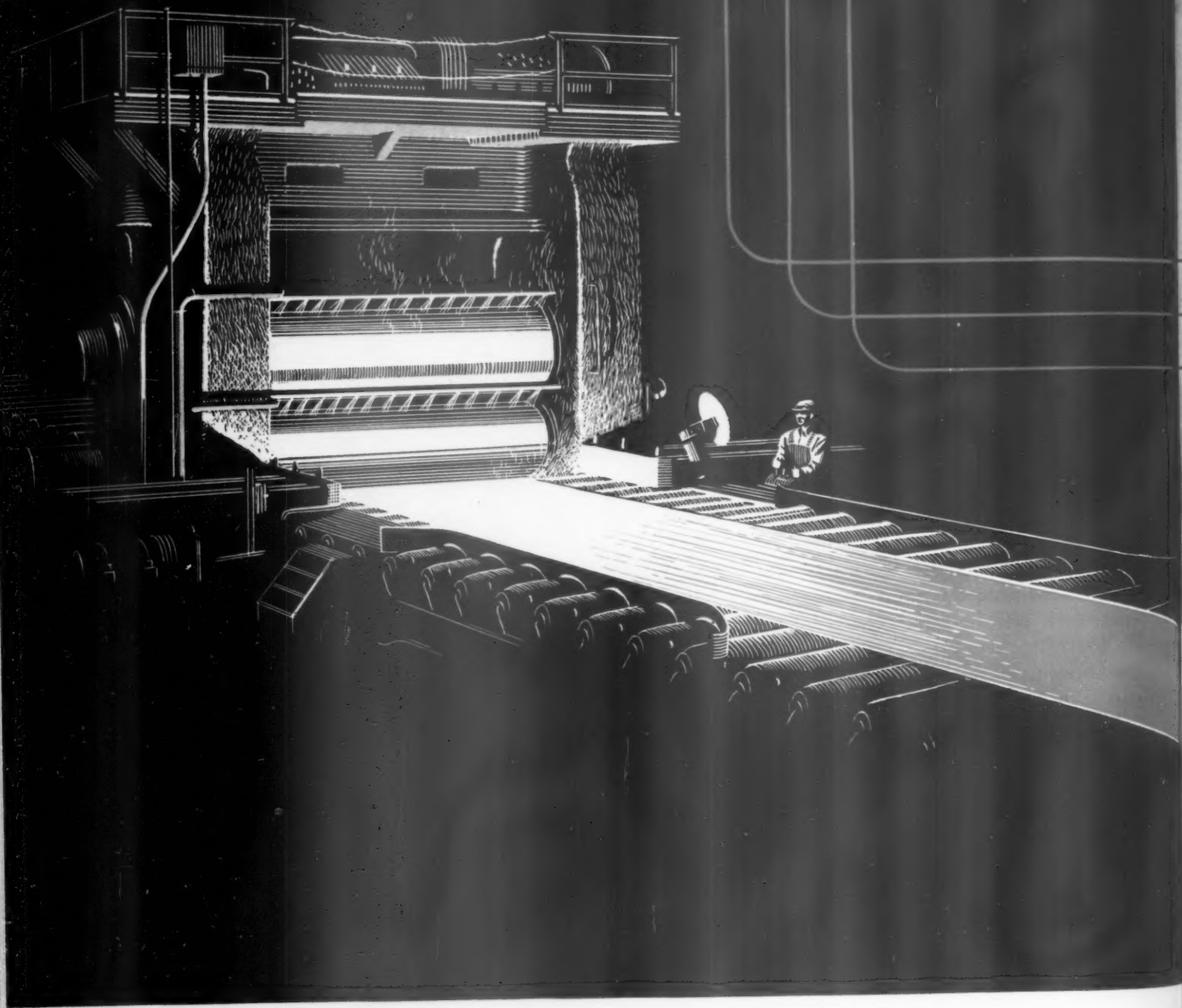
ALUMINUM COMPANY OF AMERICA, 2125 Gulf Building, Pittsburgh, Pennsylvania.



ALCOA ALUMINUM



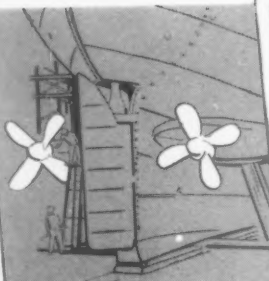
A Story of **W.E.S.** *at Work*



W.E.S.

in the SHIPYARDS

Propeller bearings and rudder bushings are subjected to tremendous compressive pressures which cause material to crack and chip in service. Westinghouse Marine Micarta proved the one best solution to this material problem. It is strong as bronze, lighter than aluminum, has eighteen times the compressive strength of lignum vitae. Ships make fewer dry dock calls with Micarta at the pressure points.



W.E.S.

in the MINING industry

Rototrol, a variable voltage control system originally developed by Westinghouse to provide smooth starting and stopping for Radio City's high-speed elevators, has been adapted for draglines and excavators. In one notable example, Rototrol was the solution to guiding and controlling the brute strength of the largest dragline ever built, a machine with 25-cu. yd. scoop capacity and a 250-ft. boom.

DOUBLE DRIVE TO DELIVER

Armor plate 13 feet wide



"Somewhere in the U.S.A." huge steel plates will soon be rolled in a mammoth mill powered by a new type of drive.

Ordinarily, large plates are produced on rolls driven through gears powered by only one large motor. This method necessitates high gear maintenance and often causes pinion markings on the finished plate. Although twin-motor drives have been used on blooming and slabbing mills, they had never been applied to plate mills. When used for the production of plate, the two motors must be perfectly synchronized. If a satisfactory twin-motor drive could be developed for large plate mills, smoother plates could be produced and the high maintenance of gears eliminated.

Working with Westinghouse to assure precision synchronization, steel engineers made a practical test. Actual plates were rolled on one of the existing twin-motor driven slabbing mills. This experiment proved that this type of drive would meet the exacting requirements of plate mills. The result, a new rolling mill drive and another industry problem solved through the co-operation of two engineering groups.

Today and every day, Westinghouse engineers are at work searching out solutions for problems in all industries. If you have a problem involving the application of electrical power, phone the nearest Westinghouse office. It's a W-E-S headquarters. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

WESTINGHOUSE ENGINEERING SERVICE

A nationwide corps of engineers offers you electrical and production experience gained through years of working with your industry.

In addition to engineering help on specific industry problems involving electrical power, these men can give you assistance on these other vitally important activities: *Product development*: engineering of equipment to meet war requirements. *Maintenance*: help in making existing equipment serve better, last longer. *Rehabilitation*: redesigning and rebuilding obsolete equipment for useful service. *Material substitution*: adapting available replacements for critical materials.

W-E-S is available to *all* industries. Put it to use today on your production problems.

J-94515

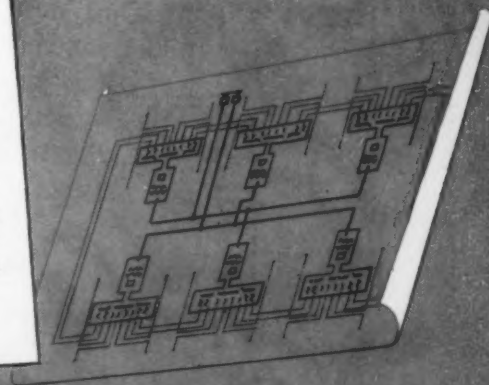
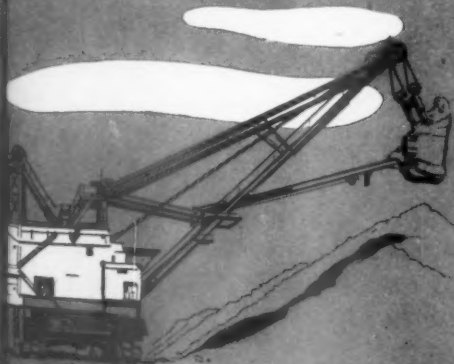


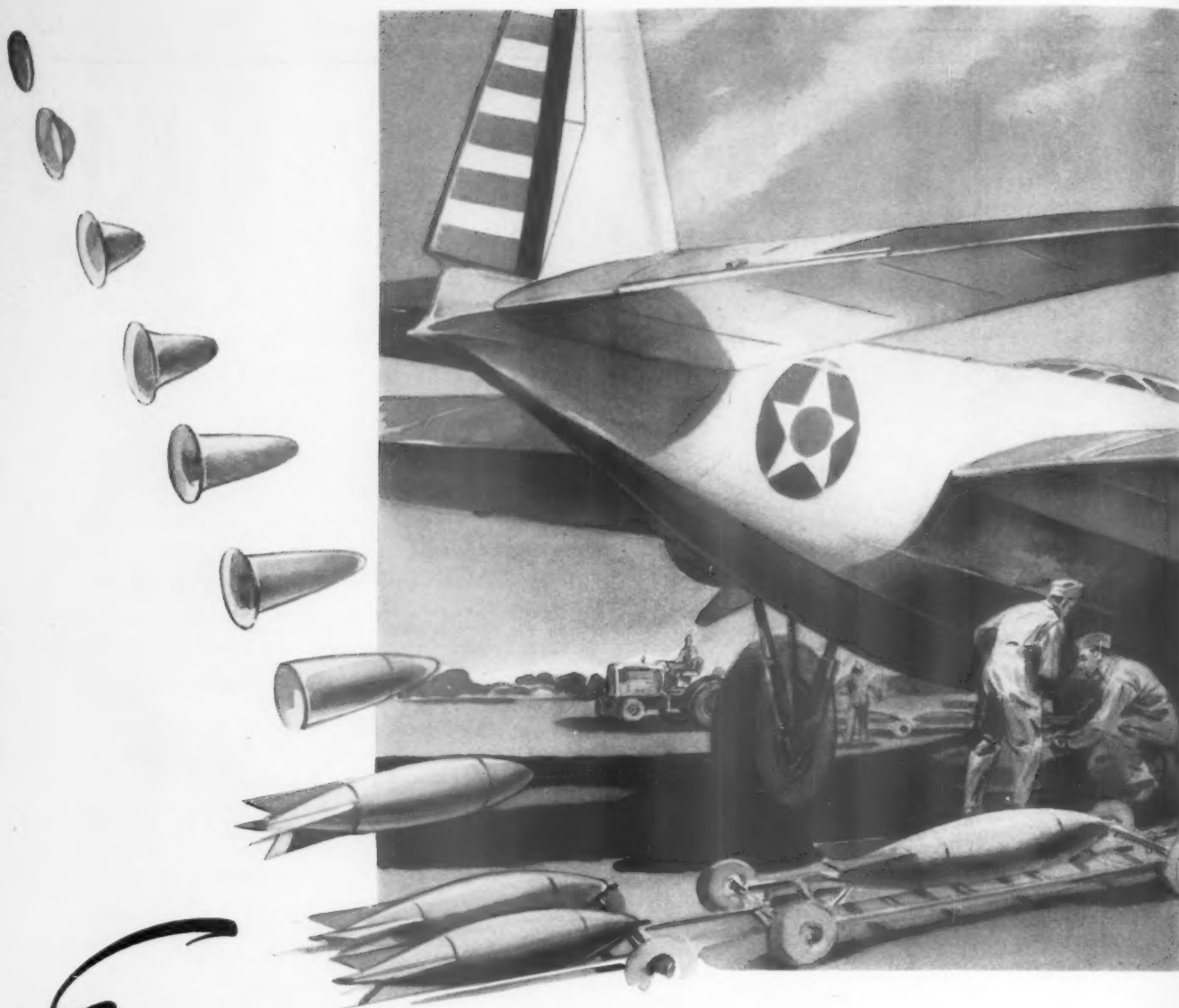
Westinghouse

W.E.S.

for WAR PLANTS

Conventional factory power distribution systems lack the desired flexibility, voltage cannot be properly regulated, and there is not sufficient protection against power failure. The Westinghouse Plant Network System is solving these problems. The Plant Network System is completely flexible, voltage regulation is vastly improved and power is protected against accidental failure and sabotage.





Eggs . . . FOR WAR BIRDS

From Tobruk to Bremen . . . from Kiska to Lae . . . America's war birds are laying "eggs" that hatch into sudden death and destruction . . . leaving a trail of scrambled tanks and bomb-shattered factories. War has gone "upstairs."

As planes take to the air in ever-increasing numbers, the production of bombs must be vastly accelerated to supply them. To save precious time, a special Quickwork-Whiting Rotary Shear is used. It cuts discs of sheet steel in 10 seconds . . . thousands in a day. There is no waiting for expensive dies, and powerful presses can be released for other war production.

This remarkable shear is another product of the inventive genius and engineering skill which American enterprise heaps into the balance, to outweigh the regimented production of the Axis. Whiting Corporation, 15677 Lathrop Avenue, Harvey, Illinois.

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MANAGEMENT'S *Washington* LETTER

A last minute roundup by a staff of Washington observers of government and business

WHITE HOUSE LOG-JAM WILL BE BROKEN, slowly, painfully.

War pressure will oblige President Roosevelt to share his burden more and more with subordinates, give them a free hand, share power as well as responsibility.

Efficient administration requires it. Public demands it.

Mr. Roosevelt's closest associates urge it.

Baruch committee recommended it.

Centralized rubber control was first step in this direction—serves as pattern for later steps.

Test is whether Rubber Administrator Jeffers will be allowed to carry the ball, or is required to stop on the 50-yard line to argue with the referee and other players.

Jeffers and General Electric's Charles E. Wilson were brought in as direct result of Baruch committee's demand for more business executives in Government, more undivided authority. Others are coming.

Government's organization chart is a crazy quilt—a private industry that tried to work with such a chart would quickly face the sheriff.

Dozens of important federal agencies can't learn where their authority stops and starts; many nibble at same problem.

Repeatedly business men have come to Washington, invited heads of war agencies to their hotel rooms, beseeched them to fight it out among themselves and come up with answers. Sometimes it works.

If you have a labor problem you may

have to deal with a whole flock of federal agencies of both peace-time and war-time origin.

In one industrial city 11 federal agencies are working on the single problem of labor training and supply.

Company officials seeking rules for renegotiation of war contracts have been told by Army-Navy boards, for instance, that labor costs and taxes are no concern of these boards. Yet no Solomon could figure prices without knowing these important cost elements.

Government not only affects business, it IS business—the biggest business of them all.

So watch for more business like government.

► Rubber Administrator Jeffers was the darkest dark-horse of the war to date.

Not even he knew why he was being called to Washington until Donald Nelson said "here's the job, do it."

He was definitely Nelson's selection and a surprise to Nelson's closest aides.

Only newshawk to get an advance tip was an Akron reporter whose "beat" was only two hours ahead of official announcement.

Washington has many Jeffers and Wilsons, leading business men who are drafted by Government just as certainly as are the boys in khaki, but by moral suasion.

One well-known executive was "drafted" by long distance telephone just as he stepped off the train in Florida for his first holiday in three years. He's at a

Washington desk—for the duration.

► You'll soon be hearing about coupon banking.

It may follow distribution of universal rationing books, probably soon after Jan. 1. O.P.A. is printing 150,000,000 now.

O.P.A. proposes that American banks handle coupons in trade, much as a new medium of exchange.

Manufacturers, wholesalers, retailers would have to open special coupon accounts with the banks, which would act as agents for Office of Price Administration.

British banks are acting in this capacity for the British Board of Trade.

American banking leaders and O.P.A. are cooperating on an experiment, dealing only with wholesalers, in banks at Syracuse and Albany. Results should determine feasibility of the plan here.

Banks, already overburdened with war work, want Government to assure them at least their out-of-pocket costs, give them priorities on labor and equipment, protect them from legal liabilities.

Actually, banks in this country render more than 20 new war services, mostly without compensation. Examples: war bond sales, handling blocked accounts.

► White-haired Bernard Baruch's place in World War II was established by the Baruch committee's rubber report. He'll be chief justice of an unofficial Supreme Court of public opinion, sitting in judgment whenever Government gets into deep trouble with the public.

► President Roosevelt's wage stabilization powers will be used to entice workers out of non-essential industry, into war work.

Wage increases already have been permitted in some industries for that reason—copper, for one.

A major threat to any voluntary program of labor control is reluctance of workers to leave present jobs for war work—even when guaranteed eventual restoration of seniority and other privileges.

This has been the experience in Balti-

more, where War Manpower Commission is carrying on far-reaching experiment in voluntary labor control.

Baltimore employers are asked:

1. To do all their hiring through United States Employment Service.
2. To accept women, older men, more Negroes, who are being trained for industry.
3. To accept no labor from outside Baltimore area, refrain from "raiding" their competitors in labor market.

There's the making of another rubber situation in the manpower battle—which is political dynamite.

Highest federal officials are in sharp disagreement over extent of manpower controls McNutt needs, how much authority he should be given over Army and Navy.

Example: Secretary of Labor Perkins on Sept. 15 told Cleveland audience no further compulsory controls were needed. Manpower Commissioner McNutt on Sept. 16 told House committee that new compulsory controls are necessary and "inevitable."

Put your money on McNutt. Miss Perkins for months has been able to express only one woman's opinion.

If you employ labor, you'll be wise to keep a close eye on development of United States Employment Service.

It's king-pin in the Manpower Commission set-up. It will be to civilian population—men and women—what Selective Service is to the Army.

Eventually—probably not until well into 1943, it will tell you how many employees you can have; probably will select them for you.

Many men exempt from Army draft and holding comfortable jobs in non-essential business will be lifted from their desks and placed in war work by U.S.E.S.

Better condition your thinking and family planning along these lines now.

► Don't let conflicting statements by Selective Service officials confuse you too much.

General Hershey's word is best. He says this is outlook:

1. Youths of 18 and 19 to be inducted shortly after Jan. 1, 1943.

2. Married men without children to be called at any moment.

3. Men with dependent children—last quarter of 1943.

Much depends on how the war goes, how many casualties we are having next year.

Training in American camps has been stepped up astonishingly.

Bottleneck is still ocean transport.

Some leaders think most successful war effort to date is Selective Service. Only criticism is against policy, not administration. The work is done by thousands of business and professional men, working long hours in their home communities without compensation, dealing with their neighbors. They deserve a big hand.

► Cost of living will continue its upward spiral.

Nobody expects to stop it; object is to check it, control it.

Your unit labor costs will continue to rise, regardless of wage increases. Less efficient workers, bigger labor turnover, transportation delays, inability to mesh materials flow with production—these will send them up.

New controls for President Roosevelt over farm prices and wages will permit Leon Henderson to sleep nights—provided administration of these controls doesn't bog down through diffusion of authority.

Taxation as a control is still a serious problem and will continue to be so. It stands that the new Congress will have to load more taxes atop levies in current tax bill.

When present bill is passed, total federal revenues will be around 25 billions. Some experts insist inflation will continue to be a major threat until taxes bring in 40 billions.

Picture of inflation pressure: 1943 income for every woman, man and child in U. S. will be \$83 a month. This compares with \$78 this year, \$45 in 1937 and \$68 in 1929.

Price level is about that of 1929.

► OCTOBER AND NOVEMBER will put us knee-deep in the war.

Public impatience with government inefficiency pushed us beyond ankle-depth in mid-September.

How long do you think war will last? National Opinion Research Center poll shows 47 per cent of the public think it will last less than two years, 37 per cent more than two years, 16 per cent won't guess.

Significant is that 54 per cent think Allies should occupy Germany, Italy and Japan for several years before talking peace terms.

► Trend of Government—and so of business—will be strongly influenced by November elections.

Best Capitol Hill opinion now is that Republicans will gain 25 to 35 House seats. They need 52 for control. Gain of 25 would greatly strengthen the minority party, however.

The 1940 vote was so close in some congressional districts that Republicans could pick up 51 seats with a switch of only 5 per cent from Democratic to Republican.

In 100 districts a switch of 10 per cent would give those districts to G.O.P.

Percentage figures are always deceptive in elections. G.O.P. gain over 1940 in the recent Maine election was only 4 per cent.

Big Republican issue will be "government inefficiency."

Democrats will counter with "support the President."



1

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Outstanding feature of the primary elections was the apathy of the electorate. Vote was light everywhere, even in states with sharp contests.

Primaries also showed neither party disposed to punish those who opposed American intervention before Pearl Harbor.

Significant is the number of business men nominated by both parties for public office. Outstanding example: Albert W. Hawkes, former president of U. S. Chamber, nominated by New Jersey Republicans for U. S. Senate.

► Industry's post-war planning should not overlook war's probable effect on population.

Bureau of Census reports that in the 15 months from April 1, 1940, to July 1, 1941, 2,250,000 Americans migrated from rural areas to cities of 25,000 and more.

This trend has been enormously accelerated since war began and will continue until peak production is reached.

Colored populations of industrial cities are swelling; there's another northward trek like that of World War I.

The pendulum has seldom swung back. We've become increasingly urban and industrial, at expense of agricultural areas, for 120 years.

World War II is being fought by the curtailed baby crop of World War I.

Our casualties will be heavy in this war. A loss of 500,000 men would create a surplus of women in the U. S. for the first time. This surplus would have enormous economic repercussions, says Dr. Philip M. Hauser, assistant Census director.

Studies of population changes can be obtained through Bureau of Census.

► BY THE WAY: Liquor stocks will hold out IF Army and Navy purchases begin to fall off soon. They are buying in such vast quantities that warehousing is serious problem....World's biggest chain store system is Army's Post Exchange. Superior quality of many American products will be demonstrated throughout the world by American expeditionary forces,

buying through Post Exchanges....Secretary of the Interior Ickes feels lower than a doormat about his shrinking influence in government....The new Mrs. Harry L. Hopkins is keeping demurely in the background....Mrs. Roosevelt's syndicated column began carrying a copyright line after Westbrook Pegler satirized it and Reader's Digest reprinted Pegler's column....Few nations ever received such diplomatic tongue-lashings as Secretary Hull has been giving Vichy....Wooden soles for shoes are being tried out here and in England. No scarcity of shoes in sight for 1943, so far as "normal needs" are concerned....Radio engineers say secret developments in broadcasting techniques will completely revolutionize radio after the war; make FM broadcasting look ancient....Civilian employment by federal Government stands at 2,207,754, a new record high, and the end isn't in sight by a long shot. This is increase of 117.7 per cent over June, 1940, and 67 per cent over June, 1941....Army is taking most of the spinach pack; boys can't escape it even in the service....U. S. will get about 60 million pounds of tea in 1943 from India, about 40 million less than last year....Officers bound for England are using up excess baggage allowances with oranges, lipsticks, other items which are luxuries in Britain....New incorporations are down in every section of the country....Detroit expects sharp drop in used car sales with nationwide gas rationing....Vice President Wallace continues to be the real power in Department of Agriculture....Paper is finding many new uses in civilian life—bath mats, slippers, draperies, insulation, ash trays, ink wells, name plates among them....Army and Navy are taking all frozen stocks of band instruments....Curbs on cross-hauling are coming, one by one; O.P.A. has just prohibited movement of sugar from one to another of newly established zones....Army war contracts renegotiation board will be more friendly toward including advertising costs among admissible cost items....America's diplomatic exchange prisoners report Japanese Navy is far more considerate than Jap Army.



To managers of war plants—large or small—who want to know what they can do with their present lighting equipment to increase wartime production... save time... energy:



CALL G-E!

THE Lamp Department of General Electric has taken on a bigger job than making and selling lamps—though we are still doing both.

As one of our contributions to winning the war, we want to place our practical knowledge and experience on lighting for production *at the disposal of any plant with war work*. To do this quickly and effectively we are offering, without charge, the services of our trained lighting personnel located all over the country, to executives of war industries who would like to put lighting to work—*really to work*—in their plants.

This does not necessarily mean buying new fixtures or even lamps. It means, for the most part, getting more out of your present equipment. Many of the things which can be done are simple. *Yet they may increase usable light by as much as fifty percent!* Things such as these:

1. Soap and water—on a regular cleaning schedule.
2. Right size bulbs in present fixtures.
3. Moving present lighting fixtures, to fit new demands.
4. Supplementary lighting—for the most critical seeing operations, such as inspections.

5. Light colored walls to reduce light absorption; light colored finishes on machinery to increase visibility.

6. New lighting installations recommended only when absolutely necessary.

We think it is our plain obligation, at a critical time like this, to help every plant, engaged in war work, check up on its present lighting to avoid waste, to increase safety, improve morale and save precious manhours.

But we can only make this new job of ours function with your cooperation. You may think you haven't got a lighting problem. You may believe your lighting cannot be improved without expense and delay. You *may* be right. Yet many plant executives have been surprised, as a result of following a few simple recommendations of a G-E lighting engineer. Reach for a telephone—now—and find out. Call your nearest G-E lamp office or write General Electric, Nela Park, Cleveland, Ohio. Or your local electric company or G-E lamp supplier will be glad to give you valuable advice.

But act now.

G-E MAZDA LAMPS
GENERAL  ELECTRIC



PONTOONS...

let our battle vehicles

In a mechanized war, you've *got* to keep moving. You can't let a stream or river hold you up while you build a bridge in the regular way.

Pneumatic pontoons are the answer. Easily transported, quickly inflated... in double-quick time U. S. Army Engineers can lay a bridge over them strong enough to carry the heaviest equipment.

As in the case of numerous other war products, General Tire accepted the assignment to build these vital floats... and General is now producing them in ever increasing daily quantities.

Our armed forces *must* have rubber. Your job at home is to make sure that *not a single mile* is wasted on the tires now in use. Make *your* Victory effort one of seeing to it that your tires are kept in *top condition*; that they are not abused by neglect or excessive speed; that they are permitted to deliver *all the mileage* of which they are capable.

THE GENERAL TIRE & RUBBER CO. • Akron, Ohio

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The 
**GENERAL
TIRE**

*The Sign of
Tire Inspection,
Repairs and
Recapping by
Experts Who
Know How*



roll across water...fast!

While Husbands, Brothers, Sweethearts wear the uniforms of our armed forces, girls build war materials for their use. Shown here is one section of the General Tire pontoon factory, with finished pontoons in upper right background.



These Giant "Hot Dogs" are used to brace the General pontoons when supporting a bridge for heavy equipment. In an emergency, they can be quickly detached and the pontoons used as boats to carry up to 20 men.

VICTORY WILL COME WITH THE RUBBER YOU SAVE

Economy Begins at Home

By C. A. CROSSER

EVERYONE has an eye these days on the federal tax bill estimated to yield around \$25,000,000,000 with which Congress has been struggling for many months. It is well worth watching provided we do not forget entirely that it is only a part of the tax burden on the American economy.

State and local collections may well add another \$11,000,000,000 to the federal burden.

Our 1943 tax bill is probably going to be \$36,000,000,000.

Thirty-six billion dollars is equivalent to 85 per cent of our entire national income in 1933. It is one-third of our current national income which has greatly expanded because of the war.

What's ahead for our local and state governments? Are they headed for financial trouble? One thing is certain: State and local government-as-usual will soon be out to the same extent as life as usual for individual citizens.

Local government must do its part in winning the war, in maintaining civilian efficiency and morale. Ninety per cent of our population must stay at home. It is their very important job to keep the civilian economy going.

For those at home who wonder what part they can play in the war, there is at least one good answer:

Don't wait around until the federal Government asks you to do something. There is plenty to do where you are, in village, township, city, county and state.

Temporarily state and local governments in general are well off. Their incomes have either not been seriously cut or have actually expanded. Their headaches are delayed action but not so delayed as to be forgotten. Here are their main sources of revenue:

1. Property taxes. They are due to drop off sharply in the next two years. Why? Because of abandonment of business properties, automobile, radio, washing machine, store locations. Government, too, is taking over much property which thus becomes untaxable—(warehouses, manufacturing plants, camps, training grounds).

2. Income taxes. These are relatively stable income and will remain so.

3. Automotive taxes. These will drop sharply—no tires, less gas, less travel, fewer cars being licensed.

4. Consumer sales taxes, fees and business licenses. They will experience sharp reduction for there will be less civilian activity and civilian purchases.

What will be the result of these shrinkages and changes?

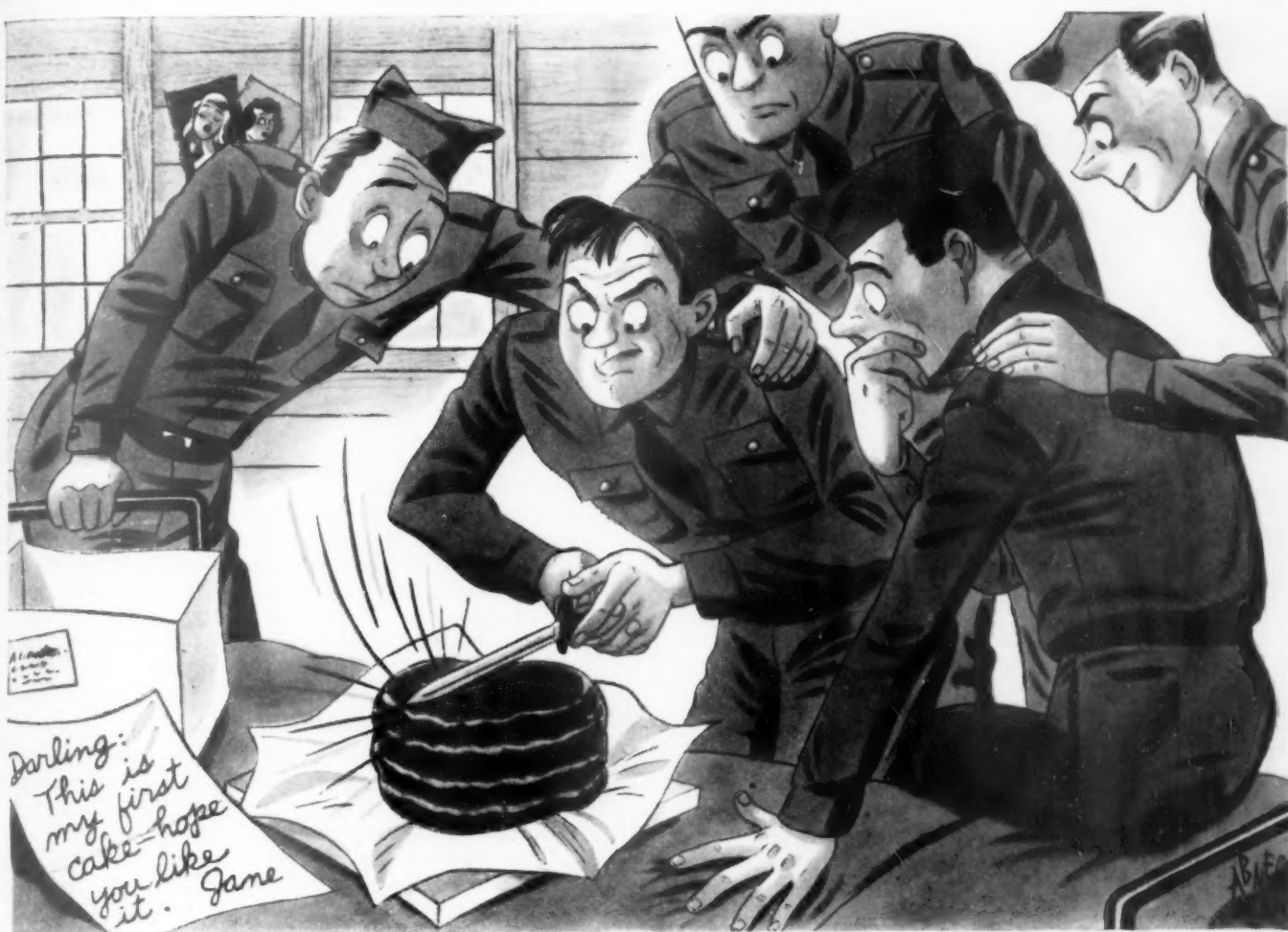
The overall effect will be that local government must find ways to make 85-90 per cent of its usual revenues cover ever growing necessary activities.

Some municipalities, crammed with new war workers, will find their requirements for school, police, fire, health and sanitation jumping 100 per cent over three years ago. An increase of 25 to 50 per cent will not be

(Continued on page 92)

12 Ways to "Do Something"

- 1• Don't fill vacancies when municipal, county and state employees join the Army or Navy, take war jobs, retire or die. Their work can be spread to other employees. For example, most tax departments are extra busy six months of the year, partially idle for the rest. Tax department employees can be transferred to other busier departments in the quiet period.
- 2• Centralize purchasing. Big cities can do this alone. Small towns can get together on a cooperative purchasing basis with neighboring towns. City and county have been combined successfully. In New York State, the law permits local governments to buy through state agencies. Savings up to 50 per cent have been reported.
- 3• Conserve and salvage supplies. One city now saves \$300 a month by salvaging small office supplies such as carbon paper, clips, pins, paper and pencils.
- 4• Centralize garage and repair of auto equipment. There are possible savings up to 30 per cent—a big item in large cities.
- 5• Develop cooperative use of automotive equipment. Instead of one limousine and chauffeur assigned to one official, pool the equipment for many officials.
- 6• Eliminate all new capital expenditures for streets, buildings and the like. This will not be hard because shortage of materials and inability to get priorities will make it necessary. Develop a long range post-war plan for deferred and new capital expenditures.
- 7• Grant no salary increases to public employees unless the cost of living increases much further. Unlike war workers who fear post-war unemployment and seek higher wages for that reason among others, state and municipal employees are protected by Civil Service, pension plans and more regular jobs.
- 8• Use more volunteers in fire and police work.
- 9• Re-check all recreational activities to eliminate frills and tighten up on essentials.
- 10• Coordinate out-of-town travel. One man can often do several tasks beside his own if he knows the job is to be done.
- 11• Reduce bonded debt by paying off maturing bonds and not issuing new ones.
- 12• Recondition and pool all equipment. Rent or borrow cooperatively, where possible, from other towns, counties and states.



war creates unusual problems

Among the many unusual problems created by the war is that of keeping your insurance adjusted to changed conditions.

• • •

An important instance of this is the effect of war economy on the value of your house or commercial property that you own. Even if you have spent no money on improvements, their sale or replacement value is probably higher than a year ago . . . and your insurance coverage should be increased proportionately.

• • •

An excellent person with whom to talk this over is the local agent or broker representing the Aetna Fire

Group. He is thoroughly acquainted with local conditions. He can give you up-to-the-minute information on how to obtain modern broad coverage at low cost. He can give you valuable assistance in event of loss.

• • •

Remember, too, that insurance with a capital stock company such as those comprising the Aetna Fire Group means insurance backed by both a paid-in capital and surplus. You are never liable for assessment.

• • •

**Don't Guess About Insurance
—CONSULT YOUR LOCAL
AGENT OR BROKER**

Since 1819 through conflagrations, wars and financial depressions, no policyholder has ever suffered loss because of failure of the Aetna to meet its obligations.

WARS	CONFLAGRATIONS	DEPRESSIONS
1846	1835—New York City	1819
Mexican War	1845—New York City	1837
1861	1851—San Francisco	1843
Civil War	1866—Portland, Me.	1857
1898	1871—Chicago	1873
Spanish-American War	1872—Boston	1893
1917	1877—St. John, N.B.	1907
World War I	1889—Seattle, Spokane	1921
1941	1901—Jacksonville, Fla.	1929
World War 2	1904—Baltimore	
	1906—San Francisco	
	1908—Chelsea	
	1914—Salem	
	1941—Fall River	



The Aetna Fire Group

HARTFORD, CONNECTICUT

Aetna Insurance Co. • The World Fire & Marine Insurance Co. • The Century Indemnity Co. • Piedmont Fire Insurance Co. • Standard Insurance Co. of N. Y. • Standard Surety & Casualty Co. of N. Y.

Washington *and* Your Business



Dawdling Will Lengthen the War

HISTORY may report that October, 1942, is the pivot month of the war. This is the judgment of certain officers of the Army and Navy:

There is no danger that we will lose the war. We can outgame and outlast the Nazis and the Japs. But, if we get down to business in October, we can win an earlier victory.



They think there is a chance that the dissatisfaction manifested by a large section of the public may compel sharper action by Washington. The man in the street has realized the fumbling and obstruction and dawdling. Industry and the Army and Navy, the officers say, have jointly done a magnificent job. They accept philosophically the misdoings of the political end. They say this was inescapable. Their statements are not offered as the judgment of their superiors in rank nor are they to be disregarded for that reason. Tomorrow they will be the superiors. Today they are hard-boiled realists.

Military Operations Well Managed

THESE officers are each in a position to know something from the inside on the conduct of affairs by the Government. They see different segments of the whole. Their comment is not directed at the military operations which, on the whole, they think are being well conducted. They deprecate the fact that we are not able to concentrate our efforts and thus take the initiative from the enemy but concede that conditions at present make this impossible. In the two services we now have perhaps 1,000,000 men overseas but they maintain that none of these men have been sent out in obedience to political considerations. We have, for example, certain forces in India, but they are not there to hold India for the British, but for operations against the Japs. Such operations might take place in India.

Temperate View of Second Front

THEY see no prospect of a second front in Europe before the summer of 1943. Such an adventure could not be entered upon with fewer than 4,000,000 combatants. An equal number of reserves—British and American—would be required. As a preliminary an immense store of *materiel* must be set up in Britain, hospitalization provided for, rest camps established, and a great air force created with the ground crews and provisioning in addition to the 4,000,000 infantry and artillery. They accept as a probability that Vichy

would turn over the French Navy to the Nazis and this would involve naval operations which might require American aid. That would depend on the British naval position and our own naval dispositions in the Pacific. It may be necessary for us to clean up the Japs before a European front is seriously considered. Their immense fear is that politicians will force a second front before the Allies are ready.

Months and Ships are Needed

TO create the *materiel* dump in the British Isles, as a preliminary to a second front, at least ten tons of ship space per man would be necessary. This includes food, ammunition, clothing, trucks, tanks, artillery and the "infinite congeries of war" as Bernard Baruch says. Thereafter a ton and a half a month per combatant is the minimum and a ton for each man in reserve. This allowance could be doubled without overdoing it. They think sea losses can be reduced to an endurable minimum by mid-1943, but to transport the men and supplies would tax the ship resources of all the United Nations. It is not yet definite how far the Latin-American nations can or would collaborate. They may be persuaded but they cannot be dragooned.

Home Problems Must be Solved

THE creation of an Army of 7,000,000 to 10,000,000 men—nothing definite as yet—would create problems in this country which the public does not yet seem to have comprehended. The management of the farm labor problem has been incredibly bad. Food supplies will be cut down, even if no overseas operations are entered upon in a big way, because there simply will not be enough food. The meat rationing plan now being worked out calls for 2½ pounds of meat per person per week. These officers are professionally interested in this phase of the situation. They point out that the Bureau of Home Economics, Department of Agriculture, is far more liberal.

Food for an Active Man

THE food chart prepared by the Bureau states the weekly food needs of a very active man as:

Six quarts of milk, four pounds potatoes, five ounces of dried beans, peas and nuts, five pounds of tomatoes and citrus fruits, four pounds leafy green and yellow vegetables, nine pounds other vegetables and fruits, 14 eggs, four pounds 12 ounces lean meat, poultry, fish, four pounds eight ounces flour and cereals (count one and one-half pounds of bread to one pound of flour), two pounds four ounces fats (butter, fatty bacon and fatback)



IS THIS YOUR IDEA OF PLATE GLASS ?



Just something to look through?

That would be a perfectly natural reaction, because probably no other single product has contributed more than glass to the world's comfort and happiness. In addition to its other valuable properties, glass has the great advantage of being transparent . . . a characteristic that is of infinite importance to mankind. Can you imagine what the world would be like without the tremendous benefits of doors, windows and the thousand-and-one other normal uses of glass?

But the tremendous strides of science and research are rapidly completing a thrilling new chapter to the service of this product which

has meant so much to the world . . . giving it new and even more useful characteristics which greatly enlarge its utility for mankind.

Today, glass is doing double duty. In the form of bullet-resisting glass, precision glass for instruments, and as safety glass in bent shapes, it is serving our fighting forces on land, on sea, and in the air. At the same time, it is constantly serving business, industry, and the home by replacing other materials which are so essential to the prosecution of the war.

For instance, manufacturers of an ever-increasing variety of products are finding their answer to their priority problems in an ever-widening use

of glass. In many instances, Libbey-Owens-Ford Glass not only solves a product problem, but supplies advantages that make that product better, more serviceable and more salable. Some of the services today performed by glass were never dreamed of just a few short years ago.

Perhaps the physical characteristics of the many new types of Libbey-Owens-Ford Glass may open the way to an entirely new use of glass in *your* product. We will welcome the opportunity to explore with you the possibility of continuing your product with glass. Libbey-Owens-Ford Glass Company, 1395 Nicholas Building, Toledo, Ohio.



LIBBEY • OWENS • FORD

QUALITY *Flat Glass* PRODUCTS

and two pounds four ounces of sugars in any of various forms.

The Bureau is in Secretary of Agriculture Wickard's department, and he will probably be the food chief when the clamp is screwed down. That chart will make nice reading for him during the long winter evenings.

How the Japs are Handicapped

THESE officers say the Japs are suffering in their war with us from precisely the handicap the Allies suffer from in fighting the Nazis. The Germans are able to concentrate because they are on the inside of the circle and the Allies are obliged to hold many important places with insufficient forces. In the Pacific area the Japanese cannot hold innumerable islands without concentrating and

immobilizing their forces. We can clean up an island at a time because we can outweigh as well as outfight the Japs. If we were to attempt to take and HOLD islands in the Pacific we would voluntarily subject ourselves to precisely the same handicap. It will be time enough to hold these islands when the Japs have been destroyed.



Submarines are Really Being Licked

THESE officers say it is folly to try to build more cargo vessels than the submarines can sink. Even if it could be done it is—they say—an uneconomical and absurd plan. They would devote the capacity of our shipyards to the construction of destroyers and mosquito boats and perhaps long range bombing planes for scouting at sea. They point out that, under the convoy system, we have obtained what amounts to immunity for our troop transports to Britain and greatly lessened the rate of sinkings on our Atlantic Coast. The Navy thinks it can make the near Atlantic out of bounds for the U-boats very soon. The submarine will always be a menace but can be controlled. Not, however, by merely multiplying targets.

They are Satisfied with Nelson

THESE statements are by realistic military men and are directed solely at the military side of the war. Of the economic side they say:

Strictly speaking it is none of our business how the civilians get the things we need provided they get them. We may deprecate the confusion and dawdling and ineptitude but if we get what we want where we want it and on time the civilians may skin their own snakes.

Broadly speaking they are getting what they want and on time. They say Industry has done a superb job. A thousand stories a day could be told of petty mistakes and misjudgments. In two years' time the greatest industrial nation in the world has reversed its course and an unarmed and almost helpless army of 174,000 men has been built into an effective force of 4,000,000 with more to come. The work was hampered by innumerable committees and authorities at cross purposes.

The only central authority with power to act was the President, and he was surrounded by Harry Hopkins and Isador Lubin and they were hemmed in by little hopkinses and sublubins. They admire Hopkins's ability:

He's O.K. as long as he does not write his own speeches.

They like his off-the-record talks. Of course he

yes's the President. No one talks back much or often to the President of the United States. Not even Churchill. Believe it or not. But before Hopkins yes's he always has his say.

He is No Machine Builder

THEY say they have seen no evidence that Hopkins has ever tried for political power for himself. It is true that he made an ill-advised foray into Iowa on one occasion, as a possible candidate for the Senate. That was undertaken against Hopkins's desire and in obedience to the urging of the White House ring-siders, who thought Iowa would take orders. Hopkins was not disappointed by the result for his only desire is to stay close to the President. He enjoys his vicarious authority and uses it unselfishly. He could have built up an inside machine in the departments, as Tommy Corcoran built up his corps of young lawyers, but it never occurred to him. Corcoran, incidentally, seems again to be outside the fortifications.

Nelson Would Not Play Goat

THESE officers are satisfied with the W.P.B. operations under Donald Nelson.

"The production program is O.K.," they say, "in spite of what you hear about its failures. There are soft spots, of course. Well, it took the Lord seven days to make the world and it isn't a completed job even yet."

The program can never be satisfactory because the overall plan is not defined. That plan cannot be defined, they think. The fact is that everything we can produce is needed. That is a bigger job than critics realize. If Nelson had weakened when he was under fire a few weeks ago he would have been made the scapegoat for all the failures and all the mistakes. He refused to be the goat. Said he'd be damned if he would.

This is the Way They Saw It

SOME of Nelson's assailants were sincere men who thought to sharpen up administrative action by attacking what seemed the weakest spot. Some were New Dealers who do not like Nelson because he is not a New Dealer at heart and some were world-rebuilders who wanted to get at the job right away without waiting to win the war. Some of the fires were started by men who had candidates of their own for Nelson's place. His chief weakness, as they see it, is that he is permitting the pay rolls to be stuffed by men who are not needed. They see evidences that politicians are able to interfere. They shrug their shoulders.



The 1-A Young Men in Soft Jobs

THESE realistic observers have only one genuinely bitter complaint. They say that progress is delayed by men who want personal credit:

A thing must be done. Some one does it. No red tape. If it is successful some one will pick it to pieces and have it done all over again with his name on it.

If all the 1-A young men were rooted out of the government service and sent to the Army this particular kind of interference would largely disappear. It has its origin in the fact that the Government is absurdly overstaffed and the jobholders are desperately making work for themselves so they can

hold on. The same thing, they observe cynically, has happened in other countries.

The Public Position Has Changed

OFFICERS of this type anywhere in the world are cold-blooded realists. Their business is to get what they need for the Army and Navy. They think the popular attitude has altered so definitely that Washington will sharpen up its methods. They say:

We can win the war by knocking off the enemy one at a time, but that means a long, toilsome, costly war. The sooner Washington gets tough the sooner we will win.

There has been a flood of critical comment—news-papers, magazines, radio—in recent weeks. The officers quoted think this is an excellent sign. Washington publicity has been unfortunate in great part. The people have been admonished rather than informed.

The result has been that, in some measure, they have acted as though this is Washington's war. They are loyal and will pay and fight. The West and South are angry and determined. The East—as they see it—is slack.

Here is an Example

IN an eastern seacoast city is a large shipbuilding plant. If there should ever be an enemy raid on the

Atlantic Coast this city is a fore-ordained target. In it is a fine modern armory which is used at intervals by a local militia organization and for high school and other dances. The commanding officer of a nearby Army camp asked permission to billet his men in the Armory:



This would be for the protection of the city. I do not anticipate a raid, but this would be a proper and customary precaution.

The city officials said no.

"Washington can't do that to us."

A Little More of the Same

THE C.O. lacked trucks to get his men into the city in the highly improbable event of a raid. The officials of the local bus company promised him the use of its buses to shuttle troops into the city:

"Nix," said the city officials. "Let Washington provide the transportation. If there should be a raid—which we do not think will ever come—we would need the buses to evacuate the people."

French and Dutch and Belgian roads were jammed with refugees when the Nazis came in. The defending troops were stymied. The C.O. said he would take the buses.

The city officials appealed to Washington. The Office of Civilian Defense ruled that the buses should be held for the evacuation of the city. The C.O. was stopped dead. The city officials are fine and well meaning men. But they had acted as though this is Washington's war.

News is Stopped at the Source

NEWSPAPERMEN generally agree that Byron Price is doing a good job as chief censor. Elmer Davis at War Information is getting out all the news he is able to find. Both agree that the censors in the Army and Navy cooperate intelligently with them. Now and then a correspondent complains because some subordinate officer has confused the functions of editor and of censor. He stops an article or mu-

tilates it because he does not like it and not because it is either inaccurate or overly informative to the enemy.

In practically every instance Price and Davis have been able to straighten out such tangles. But the reporters find it increasingly difficult to get news from the public relations bureaus of the Government—total cost about \$30,000,000 annually. The public relations men are not themselves informed.

Warned by the President's Words

WHEN the President said some weeks ago—in effect—that there is too much loose talk by government officials, the men who are usually news sources took warning.

Perhaps the President only wanted to put an end to the scandalous confusion occasioned by officeholders talking at cross purposes but one net result was that much legitimate information is being withheld from the public. Davis's O.W.I. is not always informed. Reporters generally would be willing to accept a much more severe censorship if they could get the facts.

When they do not get the facts it is only human that they make guesses. They guessed that the President planned to name an Economic Czar, in his Labor Day message. He did not and when they met him in his press conference he greeted them: "Hello, Suckers."

But it is questionable whether they were the suckers.

Here's Another Little Angle

A DEALER in refrigerators spent time and money in working up a market for the refrigerator he handles. When the sale of refrigerators was allowed he sent his men out to sell the permitted sizes:

"They know all the answers," he said. "They made sales."

But, before the refrigerators could be delivered, three signatures were obtained from the Government. The fourth sub-office-holder refused to permit the delivery of the refrigerators which had been sold.

He wanted to push the sale of another refrigerator. That's what the customers got. The dealer is fit to be tied.



Worse May be Coming

THIS dealer flounced around and asked questions. He was informed that the exigencies of war might compel the Government to establish one government name for each of a number of articles. A Victory stove, a Victory refrigerator, a Victory shoe, for example. That's all right. The dealer is a good American and, if that action is necessary, he and his fellow dealers will take it and like it;

"But some of the men in government suggest that the One Name plan may be retained after the war. Some of them are urging it. In that case what becomes of the General Electric and the Ford and the College Clothes and other brands which have been built up by hard work and advertising? I think that is one inspiration that will die on the bush."

Herbert Corey

*Can Escape
Change...*

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Manpower surplusage

THERE is desperate need, the Government reports, for 5,000 to 6,000 new government employees to help get out the payments to soldiers' dependents.

Manpower shortage is described as serious in government, in industry, on the farms.

Work shortage in a "war plant"

YET an employee of the War Department on September 12 wrote this indignant story for the Washington Post:

In the biggest war plant of them all, the War Department, people are permitted to sit around—just sit—waiting for work that never, or hardly ever, comes. Other war agencies are understaffed, need people badly, appeal to the Civil Service Commission daily for more personnel. Yet what happens if an idle War Department employee applies for a transfer? Refused; flatly, blankly and without explanation.

Office regulations say no transfers will be granted, regardless.

Back to your desk, back to your seat—just sit—and stare. But don't read a newspaper, don't go out to smoke or drink a coke. That would be wasting valuable time. These are working hours. Work? Work is what we want to do, that's why we came here—but at what? We sit, draw our paychecks on the eighth and 23d and go quietly and starkly mad. But don't read a newspaper. The newspapers tell stories of the need for increased war effort. You can practically beg for work—you speak to the officer in charge of your section—to your chief clerk—you tell them you want to work—they smile and agree with you. Yes, it's very commendable, and then they continue to let you sit.

The situation would be funny if it weren't so sad and tragic and dangerous. We're at war, you want to be fighting this war in the only way you know how—by working with all your energy for the Government. You don't want to SIT through this war. But you do keep on sitting—sitting—sitting, day after day, week after week. Waiting for work that doesn't come.

Waiting for time that can't be wasted . . . trying to fight a battle that can't be fought.

This employee describes the appeal for more workers to handle family allotments as "hysterical." If the work is lagging so badly, says the employee, "then why in the name of all that's holy don't they give me and scores of others something that will occupy our minds for eight full hours a day.

"I've been 'working' on family allotment for four weeks. I've done about five good days' work by ordinary standards."

This letter illuminates Senator Tydings' article in this issue, "Ideologies in the Budget."



Let the modern UNITROL method of housing and centralizing Motor Control help solve vital production problems

Unitrol, a simpler, better way of housing Motor Control whether inside a machine, beside a machine, or in a centralized group . . . eliminates many of the operations, interruptions, and obstacles that stand between America and the production it must have.

If you are manufacturing important motorized machines with built-in control, Unitrol speeds up that process by eliminating any need for inside mounting bases, by eliminating many other machining, wiring and assembling operations.

If you have installed or are going to install Motor Control near a group of machines, Unitrol packs Motor Control into a much smaller space, enables you to move Motor Control out of the way, to utilize space otherwise wasted. It eliminates any need for special floor or wall preparation, saves many vital man-hours, conserves vital space.

If you are centralizing Motor Control for an entire plant, Unitrol enables you to do it better, faster, easier, far more economically . . . It enables you to get more than double the amount of control in the same space . . . It enables you to adapt your control to the space you have without further preparation or building expense. It expands and contracts easily, to follow your changing requirements.

No man concerned with the mounting, installation, use or maintenance of Motor Control; no man concerned with motorized machine production, can afford to overlook Unitrol. The whole story is told in the book "Unitrol . . . the next step forward in Motor Control progress." It's free for the asking. But write today—now—for your copy. CUTLER-HAMMER, Inc., 1251 St. Paul Ave., Milwaukee, Wisconsin. Associate: Canadian Cutler-Hammer, Ltd., Toronto.



Individual Unitrol mounting frame is better for machines with built-in Motor Control. It eliminates many machining, wiring and assembling operations.



The individual Unitrol Section houses Motor Control for several motors or motorized machines, is compact, space-saving, convenient and economical.



The complete Unitrol Control Center houses all the control in the plant, for easy, speedy man-power-saving installation, maintenance, change, expansion or curtailment. No wall or floor preparation.

CUTLER-HAMMER

UNITROL

CH

Copyright 1942—Cutler-Hammer, Inc.

1892-1942

50th ANNIVERSARY

The Navy Liked His Etchings

(Continued from page 46)

with a photo-engraving plant. After several years of that, he went to another company as a photo-engraving salesman. In 1937, he built his own plant.

Almost anyone could have told him he should have waited—waited until he had the \$20,000 he needed instead of the \$500 he actually had; waited until he had some practical photo-engraving experience to go with his front office training.

So his first \$4 etching cost \$2,300 to make

ROGERS does not like to wait. Actually, in 1937, he did plenty of it, albeit unwillingly. Much of his new equipment—bought with a borrowed \$12,000—burned in a freight car while in transit. Then electricians making installations went on strike. For six weeks, Rogers paid skilled engravers for doing nothing in order to hold them until the electricians' rumpus was settled. When he finally got into operation, his first zinc etching cost \$2,300 instead of the \$4 it should have.

But, by December, 1941, he could tell his wife:

"Another year and we would have been out of the woods. I've got all the stock bought up and paid off. I owe some notes yet—I've been paying \$400 to \$500 a month and I'm almost to the goal line. Now the dictators want to grab the ball and keep it."

To some, that might have sounded like pessimism. Mrs. Rogers knew better. Married in 1934, she had been on many fishing trips with her husband, had worked in the office when times were tough. She knew his habit of thinking out loud when he had a problem to lick.

In December, 1941, his problem was bolstering volume and that volume had to come from the war production field if the plant was to be assured of getting supplies and materials.

"Airplanes, tanks, guns?"

How could photo-engraving fit into any of those?

"Battleships?"

Rogers had heard something about metal name plates being used on all ships. He supposed that each ship must use 150 or 200 plates as labels, markers or to carry instructions. He began experimenting on a small scale, etching plates with such equipment as he had. He started tinkering, too, making special tools, and dies, trying special processes.

Soon he had a new method of producing the plates—a plan that meant ten times the usual volume of production per man-hour.

Rogers took some samples and went to see an engineer at the Brown Ship Building Corporation. He made three such calls. At the end of the third one, he had learned that, instead of 200, each ship had from 2,000 to 3,000 such plates and Rogers had a subcontract for 22,000 of them—one-half to be delivered within 30 days. He called his Saturday afternoon poker playing crowd.

"Count me out. I've got work to do."

He had. He needed special equipment, he had no money except enough to keep the plant going on the usual commercial work, and he had a war contract to fill in 30 days.

He explained this to the local W.P.B. office.

"Okay."

Rogers got an equipment manufacturer by long distance.

Yes, some of the stuff he needed was available. Some was not in stock but the manufacturer thought he knew where a used unit could be had. More long distance.

With W.P.B. offering every assistance and the equipment manufacturer eager to comply with any plan to aid the war effort, this special equipment had crossed the nation, was installed and operating in the Art Engraving Company's plant within nine days.

Then came financing:

The equipment manufacturer agreed to take installments, but labor, materials, special tools and dies had to be paid for in cash.

Rogers went to his regular bank.

"Sure," the banker said, "We will let you have 80 per cent of the contract when the work is finished—but, of course, we can't advance any money just on the contract."

The Houston office of R.F.C. might do something—but it would take three to four weeks.

\$20,000 security for a \$1,000 loan

THEN a W.P.B. representative telephoned the First National Bank.

"Go down and talk to W. A. Kirkland, a vice-president," he told Rogers when he hung up.

Rogers was dubious. He had never been a customer of this bank except for a \$150 personal loan back in 1933. But he saw Mr. Kirkland.

"We'll let you have \$1,000 on your personal note for 90 days. We'll charge you five per cent interest."

"I thought all banks charged six per cent on personal loans," Rogers said, so elated to get the money that a higher rate of interest didn't matter.

"This is for Uncle Sam."

"From then on, I felt like an adopted son," Rogers says.

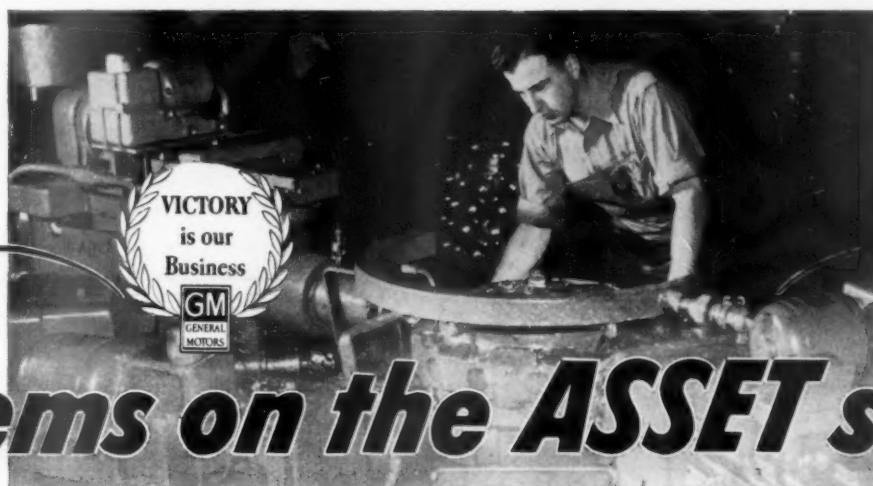
A week later the original \$1,000 loan was increased to \$3,450 with the war contract as collateral. Within 54 days the loan was paid in full and the unearned interest was refunded.

Meanwhile, although he had only a contract number, Rogers was producing. Work on the contract was well under way and many of the plates were finished before the Navy sent the formal purchase order.

Once in production and with a line of credit established, Rogers wanted to get into position to handle other war production contracts. He went back to R.F.C. for money to help finance the second half of the contract. By then R.F.C. had authority to make loans locally and a \$1,000 loan was soon arranged.



"Don't you want to wait for these?"



Items on the ASSET side

THERE are two ways you can look at what is taking place in busy, wartime American industry.

You can consider, first, the immediate aspect—what is being done to provide the specific weapons which our army must have before victory can be forged.

Or you can take the long-haul view—what is happening that can serve to make life richer and finer once peace is won.

On the first score, news items like these, which could be multiplied many times over, tell the story quickly:

★ "The rate of production on Buick-built airplane engines has for some months been more than a year ahead of original schedules. Quality in these engines has proved to be above what the most optimistic at first thought possible."

★ "One of Buick's newest and most important contributions is the production of large shell casings by a method which permits the use of steel instead of precious copper and brass."

★ "The Buick tradition for building rugged vehicles that can take it is being well maintained by Buick's part in the nation's tank program. Building essential drive parts, Buick is more than meeting require-

ments of volume while providing precision that is a great factor in our tanks' reputation for dependable performance."

★ "Anti-dive-bomber shells are being produced by Buick in quantities."

★ "Gun mounts, made in one Buick plant, require a freedom from gear play and backlash such as might be expected only from hand-finished laboratory products. Quality-wise, Buick mounts might pass for just that, if steady and voluminous output did not prove them the fruit of established mass production."

The list of such items would be longer if the whole tale could now be told.

The important thing is—America is getting its needed war goods—and while getting them, is acquiring other assets for days to come—for example:

ITEM ONE: NEW PRECISIONS

Here at Buick we used to pride ourselves on the number of operations we performed within limits measured in ten-thousandths of an inch. Now there is one part we make in steady and considerable volume where a tolerance of twenty-five-millionths of an inch has meant the difference between filling the bill and not.

ITEM TWO: NEW MATERIALS

Faced with material shortages that compelled fast action, America probably has learned more about materials, alloys, metallurgical formulae, and so on, in the past year than in the preceding five or ten. One thing we have cooking here at Buick, for example, is a new way of toughening steel *sans* nickel, chrome and other hard-to-get hardening ingredients.

ITEM THREE: NEW TECHNIQUES

Count the items made for all-out war, and you have a close approximation of the number of new techniques America has had to develop to handle this job. Quoting again from Buick experience simply because it's what we know best—we have developed a process of handling steel that permits its use in places where for years only copper or brass would serve.

ITEM FOUR: NEW TRAINING

Skip military trucks, scout cars and like vehicles, and there are very few special skills used in automobile building which are instantly applicable to the making of war goods.

Buick alone can now report a record number of men and women retrained for war work, with still more coming along. And we are only one outfit among many who have done the same thing.

war goods
**WHEN BETTER AUTOMOBILES ARE BUILT
BUICK WILL BUILD THEM**

★ ★ ★ ★ ★ **BUICK** DIVISION OF **GENERAL MOTORS** ★ ★ ★

HELPING BURROUGHS USERS MEET TODAY'S PROBLEMS
WITH THEIR PRESENT EQUIPMENT

"... and we get an extra
posting hour each day
out of our Burroughs"



**Suggestions like these may help you to obtain
more posting hours a day with your machines**

Relieve the operator of non-posting work—

Have a clerk do the pre-listing, stuffing, checking for errors, heading new accounts, and so on.

Keep the machine producing steadily—

Assign a substitute to the machine during the operator's rest periods, lunch hours, vacations.

Combine records or tasks—

Post related records together, and obtain statistics or figures for reports as a by-product of regular routines.

Take full advantage of machine features—

Make sure that the operators are thoroughly familiar with all keyboard controls, automatic features and the various special time-saving advantages built into the machines they are using.

1 1 1

For many other suggestions that will help you get the most out of your present Burroughs equipment, telephone your local Burroughs office, or, if you prefer, write direct to—
BURROUGHS ADDING MACHINE CO., DETROIT, MICH.



Burroughs

FOR VICTORY—BUY UNITED STATES WAR BONDS AND STAMPS

"I figured it would look like good faith on my part to put up as much collateral as I could instead of as little as I could," Rogers says. "So I assigned the contract to R.F.C. as the original loan on the first half of the contract had been paid off. In addition, I gave R.F.C. a second mortgage on the equipment—a total of about \$20,000 collateral for a \$1,000 loan. Later I borrowed an additional \$3,500 without additional collateral. Four days later I paid off the entire loan."

In the meantime, similar war contracts and subcontracts were coming in without interrupting the routine of commercial photo-engraving, which is and will continue to be the backbone of the firm's business.

Moreover, while the first contract was under way, Rogers was busy experimenting with different metals and with substitutes so he could be ready when W.P.B. orders further curtailed the critical materials he was then using. These experiments, now completed, give reasonable assurance that this plant will be able to work in the war program for as long as the war continues.

**Seven lessons for
small business men**

ALTHOUGH he is a small operator in this war program as compared with some of the gigantic industrial manufacturers, Rogers has learned some lessons in war work that are helpful to the thousands of other small business owners who want to aid in this war program. In summary, these lessons are:

1. There is a place somewhere in the war program for any man or any firm—but the individual must determine this place and not wait to be discovered or drafted.
2. Contractors, Army and Navy Engineers and Government representatives are eager to cooperate with small businesses.
3. Some bankers are war contract conscious and eager to aid with loans and counsel for those seeking to fit into the Victory program.
4. W.P.B., R.F.C. and other government agencies have slashed away the traditional red tape and are eager to give immediate help where the business man has demonstrated this ability to produce.
5. This is war—the Government is not underwriting or guaranteeing future profits. The pioneer American spirit has to prevail in war contracts too, because nobody can safely say just what the picture will be tomorrow.
6. There are always the possibilities of bigger fields for post-war days—as in the case of Rogers, he already sees various fields for using his additional equipment for post-war production.
7. It isn't necessary to go to Washington to find out about ordinary prime or subcontracts or about financing war contracts. Local and regional offices can usually supply the necessary information without involving any great cost to the business man.

Science Tests Folklore Faith

SCIENCE forum held by General Electric in Schenectady turned up many questions about weather signs, confirmed several popular sayings with regard to natural phenomena. From Professors Clauser and Jones of New York State Teachers' College came explanations of truth in folklore.

Among hardest perennials is question "When there is dew on the grass in the morning, will it be a fair day?"

Answer is qualified "yes."

There is always a certain amount of water in the atmosphere. Dew is water which precipitates out of the atmosphere on things on or near surface of the earth. Sweating of a pitcher of ice on a hot summer afternoon is a familiar example. That sweat is actually dew.

Fair weather helps dew

WHEN the sun goes down, things on or near earth's surface lose heat and become colder than during daytime. When they become cold enough to reach dew point of atmosphere around them, dew is formed.

If the sky is clear, things on or near the surface of the earth lose more heat than if the sky is cloudy, thus dew is formed. If the sky is overcast, clouds act as blanket and hold heat around earth so temperature of things on or near surface does not reach dew point. Result is that little or no dew is precipitated from atmosphere.

The saying "rain before seven, clear before 11," is true of certain kinds of showers. Most of the United States has a climate of alternating cyclones and anticyclones; that is, low barometric pressure areas and high barometric pressure areas. As a high pressure area moves into low pressure area, a brief shower is likely. Just before, or accompanying, this shower, the wind usually shifts from southerly to northwesterly. If one of these showers starts before seven o'clock in the morning, it is a good bet that it will stop before 11.

Scientific fact also supports the saying, "Mackerel sky, not 24 hours dry." A low pressure area usually is accompanied by clouds. First clouds to come from the west are the cirrus clouds. These soon spread out to become the characteristic mackerel sky. If the low pressure continues for 24 hours, rain is likely.

When the underside of the leaves on trees can be seen, rain is imminent, the speakers contend. During a cyclone, or low pressure area, the air tends to rise, turning the leaves over.

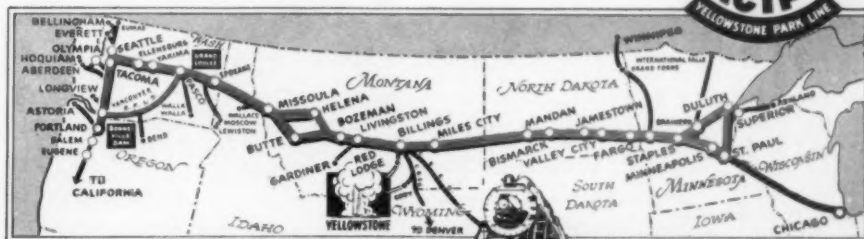


Snowflake today... kilowatt tomorrow

HIGH up in the mountains of British Columbia, falling snowflakes feed the ice fields that are the source of the Columbia River. For over 600 miles, this "river of snowflakes" flows along virtually unimpeded, but southward, in Washington and Oregon, the Columbia is harnessed into a mighty war-weapon by two great dams—Grand Coulee and Bonneville.

Today, these dams have a generating capacity of 624,400 kilowatts of power for industries in the Pacific Northwest—industries vital to the War effort and to the creation of the new empire in the Pacific Northwest that will trade with all the world when peace comes.

Northern Pacific Railway originally hauled vast quantities of steel, cement and other materials to erect these two dams and today continues to deliver over the "Main Street of the Northwest" supplies to complete and maintain them.



"MAIN STREET OF THE NORTHWEST"

Economy Begins at Home

(Continued from page 76)
uncommon. A new community service—civilian defense programs—will add to burdens.

If these services are not kept at an adequate level, the penalty will not be long delayed. Inadequate fire and police

service means higher insurance rates. Poor schools and bad sanitation bring other costs to a community.

Nor will many localities having no war business escape the general situation. Their populations will shrink because of the draft and labor migration. Their tax

bases will be smaller and less certain.

Thus nearly every community faces the problem of less revenue and more necessary work. What to do? Choices are few and, in fact, only one will prove worth while. Perhaps the first choice to come to mind is to raise taxes further. The new federal tax burden, plus the rising cost of living and purchase of war savings securities, makes this choice next to impossible. It will do no good to have uncollectable taxes on the books. If

"Home Front" Contributions



Car and Rubber Conservation Plan Good Fellowship Club



Windshield sticker—showing number of zone in which member lives



Reverse Side of Windshield Sticker



Front of Ride Token



Back of Ride Token



Lapel Button

It is believed that the club plan will result in each car carrying four workers rather than the customary 1.53 average

In addition to casualty station equipment, the Johnson truck has an awning, table, splints and stretchers

THROUGH the civic generosity of H. F. Johnson, president of S. C. Johnson & Son, Inc., Racine, Wisconsin, will have a mobile casualty station to serve within a 150-mile radius if disaster should strike.

In 1940, Mr. Johnson bought the truck to serve as a field laboratory in behalf of the company's wax and paints. He has now converted the truck to serve any emergency while the country is at war. The unit carries standard pharmaceutical, surgical and medical supplies—is being used throughout Wisconsin to demonstrate equipment needed during an air raid.

Another type of civic service, which has become a model for other communities, was contributed by the White Motor Co. of Cleveland. George H. Scragg, advertising director of the company, worked out a plan that would enable each worker to drive his car one week and let it rest four.

The city was divided into 208 zones. Employees were grouped according to work shifts, plant divisions and home location (zone). Posted lists enabled each employee to find out who lived near him. After joining the Good Fellowship Club, each member was given a windshield sticker with number of zone so anyone could tell where the driver was going.

To prevent chiseling or embarrassment, everyone was given ten tokens to pay for ten rides. Having used his tokens, he must drive his own car to get more.



VITAL MANPOWER MOVES INTO ACTION

WHERE BUSES ROLL!



All the swift and powerful machines in the world are useless without men and women to run them . . . maintain them . . . *fight them!* That takes MANPOWER . . . the kind now moving to U. S. working and fighting fronts on a scale never paralleled in history.

Specializing in transporting manpower for the past twenty-five years, intercity buses have taken over this movement at the incredible rate of more than three-quarters of a billion passengers in 1942 . . . *the first year of war!*

That's 50% more people than ever traveled by bus in any previous year. And the great majority of them are moving to war-connected jobs that can not wait . . . to highway points where buses alone can efficiently take them.

Buses bring the manpower that keeps strategically located war plants roaring with action. To military centers, buses deliver a flow of selectees

from every city, town and crossroads along 330,000 miles of highways. More and more, men and women in uniform, farmers, teachers, students, essential business travelers are depending upon this flexible "Highway Task Force" that has so effectively patterned its service to meet the travel needs of today.

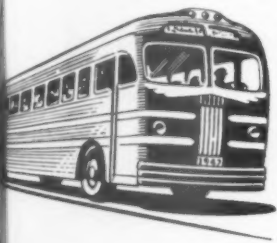
And everywhere buses go, they offer a ready, organized method of *sharing-the-ride*—multiplying by many times the passengers carried by each pound of rubber, each gallon of fuel.

Co-operating fully with the government and with each other, bus lines are doing the war-time job—to the utmost limits of tires, equipment and replacements available. But the enormous volume of war-time travel is taxing transportation facilities to capacity, and calls for the continued cheerful acceptance of minor inconveniences on the part of millions of bus riders. With this public co-operation, all essential civilian and military needs will be served.

The might of America is measured by manpower, and manpower moves into action where buses roll!

MOTOR BUS LINES OF AMERICA

NATIONAL ASSOCIATION OF MOTOR BUS OPERATORS, WASHINGTON, D.C.



TO MOVE MORE MANPOWER AND CONSERVE RUBBER—

- Bus lines have discontinued non-military charter trips, sightseeing tours, many "extra" sections and all services not strictly essential.
- Bus lines are co-ordinating schedules, eliminating duplication of service, pooling facilities and equipment.
- Bus lines, employing diligent maintenance and lower speeds, are achieving near-miracles in the conservation of rubber and other vital materials.

You Can Help By:

- Traveling only when it is necessary.
- Leaving before Friday and returning after Monday if you can possibly arrange it.
- Taking as little baggage as possible.
- Consulting your bus agent in advance, about best hours and schedules for traveling.

★ BUY WAR BONDS! ★

tax increases are out of the question, how about doing a less thorough job on necessary community and state activities? The objections to that choice have already been stated. Already, one large midwest city has been forced to cut its garbage collections in half, to give police and fire departments payless furloughs. The results have not been pleasant. The only real choice is careful paring of essential activities and elimination of dispensable ones. This requires a program worked out between public officials and taxpayer committees.

The job calls for cooperation. Public officials cannot do it alone. Civic organizations—taxpayer committees, chambers of commerce, better government associations—cannot go to civil authorities with vague generalities and

exhortations "to do something."

There is no one single way to make cuts, to tighten up and to increase efficiency. To do a complete job, there must be detailed study of each activity of local government.

Cutting must be done judiciously and specifically. It will prove futile merely to pass a resolution that expenses must be cut 15 per cent.

Business groups and other citizen organizations have an opportunity for immediate and valuable service in protecting and strengthening services essential to their communities in wartime and in putting them on a basis now which will make post-war adjustments easier.

The important thing is to make a start, to get people thinking about their local problems.

World's Toughest Fighting Man

(Continued from page 45)

along more or less formal and pre-ordained lines. They are good lines. They produce strong and tough bodies. The lines are familiar to any who have seen the rotogravure sections, or have bought time in a gym.

They are likely to have this feature in common: They are conducted by pro-

up his champions. If the coach is an addict of jiu jitsu or its modernized version of "judo" or has gone line and hook for commando methods he teaches his young men how to bite, gouge eyes, break necks, knee an enemy, stick him with a knife, rope and tie him, strangle him with a neckerchief, and engage in the other pleasing varieties of mayhem

until he has finished a 30-year-hitch and never get close enough to a Jap to bite him. If he does get close enough, his natural intelligence will tell him to knife or bayonet or club. In actual, professional war his killing will be done with the big guns on shipboard or, if on shore, with Tommy gun, rifle, or hand grenade.

He is therefore instructed in the use of these weapons. Proficiency with the truly American rifle is encouraged. The censor might reasonably object to a revelation of the scores made by the young men and none will be used. Because a sailor is on occasion called on to march he is trained in foot-slogging. In his awkward squad chrysalis he runs a few yards and walks a few yards and rests; he runs 220 yards and walks 220 yards and rests; he runs a mile and walks a mile and rests. Presently he is doing 20 miles a day and liking it.

This is only the background of his training. Along with it goes swimming. Perhaps not half the men in the average Navy the world over can swim far enough to get on board a life raft if a ship goes down. The men in the American Navy will all be able to swim. They have been trained by men who know their business. They have passed through that stage in which the water makes them gasp and fight it. They accept it with almost the equanimity of a seal.

Physical training, new style

THE intensive physical training for which the preceding is only the backdrop is being conducted by Lieut.-Com. Gene Tunney.

The Navy looked at the Tunney theory and found it good.

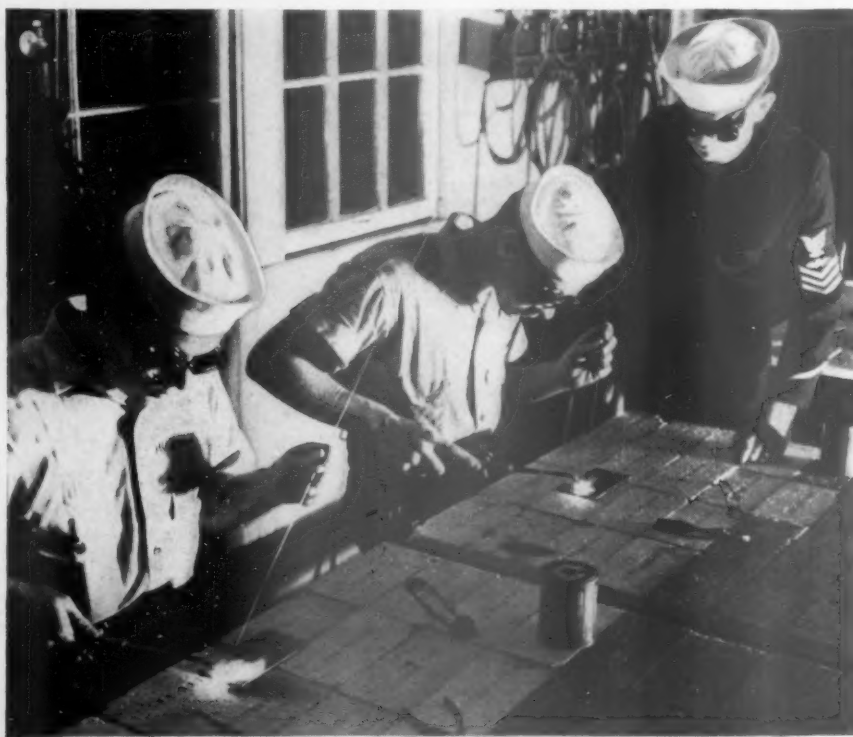
The Tunney idea is to make the Navy's enlisted man strong and agile. The old arm-waving has been abandoned. The men twist and bend and run. Light weights are used instead of heavy dumbbells. Tunney worked out the system for himself during his progress toward a world heavyweight championship. The men are given an all-round development instead of muscular lumps.

Along with that Tunney tells his men to keep themselves fit morally and mentally. Keep away from lewd women. Don't drink. He does not smoke and he urges the boys to let tobacco alone. Do not overeat. Keep clean. Be at all times self-respecting. The latest figures on Navy health had not been issued as this was written, but when they appear they will be revealing. The youngsters, by and large, are following his advice.

He has a corps of 3,000 specialists to carry the message. Presently he will have 5,000 specialists. They deserve attention.

The theory had been—maybe Tunney held it himself; I don't know—that the athletic specialists should be taken so far as possible from the ranks of college men.

Many of the college men were good. But—after all—they were college men. When the day's work was done they did not mix with the kids or if they did, they talked a language many of them did not know. Many a college man wanted to be a good fellow, and he was, but in many instances, he was not the kind of a good



U. S. NAVY PHOTOGRAPH

Ambitious men are given a chance to learn any one of 49 trades, each of which will be valuable when he leaves the Navy for life ashore

fessional coaches. Professional coaches have been associated with professional sports—football, basketball, baseball, foot racing. The idea of the coach is to produce a team that can flail the tonsils out of any team in another regiment or army. If he goes in for boxing he plays

which have been so well advertised by the Commandos.

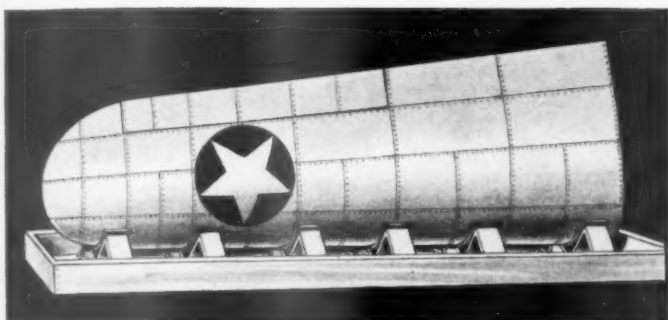
All of these things are all right.

But the Navy's theory is that training in them is something of a waste of time so far as the enlisted man is concerned. He might be in one war after another

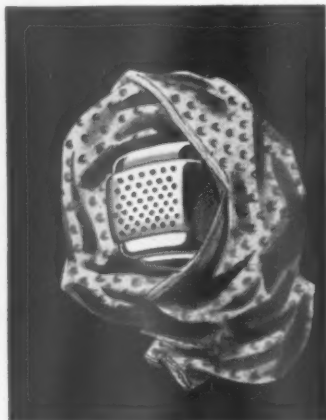


To get your war product there in fighting condition—Kimpak* it!

REG. U.S. PAT. OFF. & FOREIGN COUNTRIES



FIGHTING WINGS are KIMPAK-protected from jolts and jars at all points of contact with top and bottom of shipping container. Cut-away view of shipping container shows how strips of corrugated paper are wrapped around outer side of protective pads of KIMPAK to anchor wings securely during shipment. Here's another tough shipping protection problem solved!



MICROPHONES are wrapped completely in sheets of KIMPAK before being packaged for shipment. The remarkable "shock-absorber" action of KIMPAK thus guards these delicate instruments against breakage, chipping and chafing that rough handling might cause... helps another highly essential war product to get there safe and sound.



PARACHUTE PACKAGES for vital war materials are cushioned from terrific landing shocks with KIMPAK. Picture shows how soft, featherweight layers of KIMPAK surround package carried in interior of parachute package. Here's proof that KIMPAK has resiliency and shock-absorbing ability to meet severe package protection demands.

■ Whether your war product is as big as a bomber or as small as a bearing, one thing is certain: it's vitally important that it gets where it is needed in the same fighting condition it left your factory.

That's why you need KIMPAK*—the remarkable material that cushions jolts and jars so powerfully well. You can depend on KIMPAK to protect your war product against damage en route to assembly points . . . to final destinations.

KIMPAK Protects Light and Heavy War Products

Soft, yet resilient, KIMPAK guards light and heavy equipment against breakage, chipping, chafing. Free from grit, KIMPAK protects highly polished surfaces against scratches, press markings, "burning." And KIMPAK comes moisture-resistant to protect war goods against moisture during overseas shipment.

Feather-light in weight, KIMPAK adds little poundage to shipping container...saves on freight and handling expense. And because it's as easy to use as a piece of string, KIMPAK saves valuable time in the shipping room.

Solve Your Packing Protection Problem with KIMPAK

If you demand dependable packing protection for products of metal, plastics, wood or glass...whether they're large or small, angular or smooth, there's a size and thickness of KIMPAK to fit your needs. Economically, too. . . . Get full story of KIMPAK, the immediately available protective material. Phone, wire or mail in attached coupon for quick action!



*KIMPAK (trade-mark) means Kimberly-Clark Wadding



Kimberly-Clark Corporation
(Established 1872) NB-1042
Neenah, Wisconsin

FREE Without obligation,
send me copy of the
story of KIMPAK.

Name.....
Position.....
Company.....
City.....State.....



TO KEEP THE BATTLE MACHINES SLUGGING

Harvester Men Form Maintenance Battalion to Serve the Battle Line

FIGHTING MACHINES, like soldiers, suffer battle casualties. Tanks, trucks, tractors and guns immobilized in combat are useless until repaired.

The men who repair the wounded machines in swiftly-moving armored warfare may tip the scale to victory. Maintenance in the wake of battle calls for soldiers who can grind a valve or handle a tough welding job—men with whom mechanics is second nature.

Army Ordnance, in its quest for men to operate its mobile front-line machine shops, came to International Harvester and suggested the formation of a battalion of mechanical specialists from among Harvester's employees and dealers. Har-

vester tackled the recruiting job and assumed the expense. Within two weeks the enlistment quota was passed. Now this new maintenance battalion is part of another armored division.

From Harvester factories and service stations, and dealers' shops all over the United States, came mechanics skilled in the building and servicing of machines. They volunteered eagerly to go to the front lines to keep the combat equipment on the field of action.

They will serve with the first such battalion formed from the manpower of a single company. Harvester takes the greatest pride in the speed and enthusiasm with which these hundreds of men

volunteered; and in the aptitude of the men now in field training, reported to us by the regular Army officers in command. They are worthy comrades of the 5000 Harvester men who preceded them into military service.

American mechanics are the world's best. They come from the factories, shops and service stations of America—free men—builders of a free land. The Army needs 100,000 more of these men, to be enlisted in many similar maintenance units. Their skills are among our greatest assets in keeping the battle machines slugging for Victory.

INTERNATIONAL HARVESTER COMPANY
180 North Michigan Ave., Chicago, Illinois

INTERNATIONAL HARVESTER



THEY START LIKE A *Bat out of Hell!*

Thanks to Cities Service Research

Pound for pound, Uncle Sam's new torpedo (PT) boats are the deadliest things afloat. They can streak along at 85 m.p.h. and turn on a dime. Pulverize a submarine with depth charges. Make clay pigeons out of dive bombers. Kick up a smoke screen, and tear into the "big boys"—as David tore into Goliath. Or in the dead of night, glide silently into enemy waters and let fly with four torpedoes. Ask the Japs at Subic Bay!

It took plenty of figuring to put these babies together. And one of the toughest problems was: *How to get these 4000 horsepower bantams started pronto . . . without the usual long preliminary warm-up and the loss of many gallons of precious fuel.*

Cities Service went to work on the problem. And finally, out of ceaseless research, came the Immersion Heater—a compact instrument that keeps oil at

uniform temperature. Today, equipped with these Heaters, the PT boats can take off almost instantly. And they are taking off—carrying the fight to the enemy on all the farflung waterways of the world!

Chalk up another smash hit for Cities Service! The same research that developed Cisco Solvent and Trojan Lubricant has scored again—this time for Uncle Sam!

In war, as in peace, the ideal of Cities Service remains the same. *Service to the Nation.*



Many Cities Service dealers have signed the O.D.T. pledge and are qualified to render protective maintenance service to America's vital transport fleets.

spare crews must be carried in anticipation of losses in battle. Those for whom there is no bunk space may sleep in hammocks or roll up their blankets where they can.

After bedding has been stowed all hands turn to and scrub the decks. The word "scrub" is used advisedly. Sand and soap and plenty of water and brushes and a squeegee are used. The Navy calls it a squilgee. At 7 o'clock they knock off to clean up for breakfast. Mess gear sounds a quarter of an hour later. The men assigned to the duty go to the galleys and get the food for their mess. Breakfast is at 0730. At 0800 the band starts playing and the work of cleaning up the decks for the 0845 inspection starts. If a man is sick he answers sick call at 0830.

So it goes. The different parades are inspected. The men change into clean uniforms. They do ten minutes setting-up exercises followed by a brisk ten-minute run around the decks while the band plays. An hour's drill fits in, an hour's instruction follows, the mess call sounds, the band plays again and the men drill again, and at four o'clock there is an hour and a half free time for every one except the men on watch. The boxing and wrestling teams go at it, radios are turned on, and those so inclined go to the library to study or read. Supper at 7:30, movies at 9:20, all hands turned in at ten o'clock. Often the routine is varied and there are more movies and more boxing and more music. In port they are given liberty one day in two.

Many trades are used

IT IS not a hard life, although it may seem hard to city softies. The ambitious men are given a chance to learn any one of 49 trades. Each trade will be valuable if the student leaves the Navy for life on shore. Navy trade schools are grouped as electricity and ordnance, communication and clerical, machinist and metal worker, aviation machinist and metalsmith, aviation ordnance man and radioman. The man who makes good becomes a petty officer right away. Secretary of the Navy Knox has called these men a magnificent corps of specialists. A man who has had a grounding in civil life in any one of the 49 trades may be made a petty officer as soon as his proficiency is established, with the corresponding rises in pay and allowance.

And if he is very good—very good indeed, take it from the men themselves—he may get to serve on a destroyer, which is about the liveliest life possible. The only livelier life is on a PT boat, the PT's being infuriated tin cans that slam through seas at tremendous speed. Bulkeley took General MacArthur away from Bataan in a PT. Or, if he is of the placid, calm, courageous type, he may get a job on a submarine. If he is any one of the three he would not change his assignment for a seat on the Supreme Court plus a bevy of hours. Among other advantages they observe that:

The Military police never say anything to us. They just look the other way. They know who WE are.

OIL IS AMMUNITION — USE IT WISELY!



CITIES SERVICE OIL COMPANIES

NEW YORK — CHICAGO — SHREVEPORT



An Award - - FOR RUSHING VITAL WAR PRODUCTS TO OUR FIGHTING MEN



COLD STORAGE
IN TROPICAL AIR BASES



BOMB SHACKLES



GUN PARTS



BOMBER PARTS



REFRIGERATION FOR ARMY CAMPS



PORTABLE REFRIGERATION PANELS
FOR MILITARY OUTPOSTS

The joint Army-Navy "E" Award flag now waves over the Chrysler Airtemp plant. This coveted banner is a tribute to the men and women of Airtemp for their round-the-clock war effort!

The citation reads, "For high achievement in the production of war equipment . . .". It was earned by meeting stiff production schedules. Vital war products and parts of a wide variety have been rushed from Airtemp production lines to meet the ever-increasing demands of our fighting men.

From delicate mechanisms and units for bombers and anti-aircraft guns to field kitchens for men on the march, all Airtemp war products are playing a vital role! They all call for high-precision manufacture, sturdy construction, unflinching performance and quality.

Chrysler Airtemp proudly acknowledges the Army-Navy "E" Award. It is a fitting reminder to every member of the organization to keep everlastingly at production on the home front to back up the men on the fighting front!

CHRYSLER AIRTEMP
AIRTEMP DIVISION OF CHRYSLER CORPORATION • DAYTON, OHIO

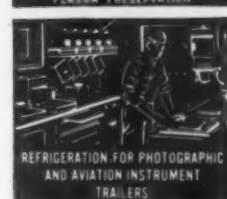
WAR PRODUCTS OF CHRYSLER CORPORATION: Army Tanks • Tank Engines • Anti-Aircraft Cannons • Bomber Fuselage Sections • Aircraft Engines • Aircraft Wings • Shells and Projectiles • Command Reconnaissance Cars • Field Radio Cars • Troop and Cargo Motor Trucks • Weapon Carriers • Ambulances • Army Carry-Alls • Duralumin Forgings • Air-Raid Sirens • Fire Fighting Equipment • Marine Tractors • Gyro-compasses • Powdered Metal Parts • Cantonment Furnaces • Field Kitchens • Tent Heaters • Refrigeration Compressors • Marine and Industrial Engines



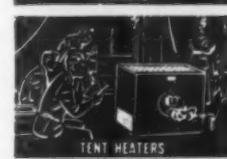
"ATTACK FROM HERE!"
AIRTEMP'S FACTORY SLOGAN



AIR CONDITIONING - MILITARY
OPERATING AND X-RAY ROOMS
PLASMA PRESERVATION



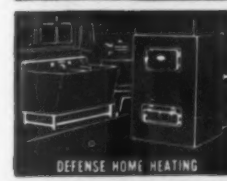
REFRIGERATION FOR PHOTOGRAPHIC
AND AVIATION INSTRUMENT
TRAILERS



TENT HEATERS



SUB CHASER REFRIGERATION



DEFENSE HOME HEATING



TEMPERATURE CONTROL FOR
TOOL AND GAUGE ROOMS

The Yardstick Becomes a Scepter

(Continued from page 42)

other innocent-appearing objects left lying about in abandoned war-zone houses. When the unwary attempt to pick them up, they explode. The Smith-Bone bill, according to expert analysis, has similar properties.

"Philadelphia lawyer" bill

THINGS are in that bill, according to capable diagnoses, that a Philadelphia lawyer wouldn't know what to do with; the trouble is, these diagnosticians contend, that a number of Washington lawyers—Washington by adoption—do know just what to do with them if this bill becomes law. They are working, in a number of instances, for federal officials who would do them.

Named for Senator Bone, and Representative Smith, both of Washington State, this bill is apparently a series of amendments to the so-called Bonneville Act, which covered the Bonneville dam alone and would bring in Grand Coulee public power developments. It provides an administrator for these and sub-

sidary public power projects on the Columbia River. It gives this administrator extraordinary powers, however.

Summarized, it purports to broaden the original Bonneville Act to include such things as flood control, irrigation, and to combine the operations of the various public power developments in that section. Among its aims are "promoting the widest possible and most efficient use of electric energy."

That stipulation, read in the light of public power advocates' claims that public ownership of distribution systems is necessary to achieve the fullest use of federally generated power, reveals that, in the hands of the right official, that law could be stretched surprisingly. This is merely a sample, however.

Every fresh reading reveals something in this proposed law that nobody openly suspected was in it.

For reasons that have nothing to do with public power, therefore, several West Coast communities, and various eastern states, have interested themselves in this legislation. Moreover, be-

fore the bill becomes law, it is likely to attract even wider attention.

It seems unlikely that any right-minded official wants to walk into your store or plant and take it over on the ground that the public interest will be better served if he runs it than if you do.

It seems unlikely, too, that having taken your plant, he would seize your records, leaving you—if you sought payment for your property—with nothing to show what that property might have been worth.

And yet, according to widespread interpretation, an official who wanted to could do just that if the principles written into the Smith-Bone bill become law.

Because of such "booby-traps," say various authorities, this proposed measure is not merely a public power bill. It is a document that clever lawyers behind federal office walls could drive one of Mr. Ickes' farm machines through sideways, either as a law, or as a precedent.

Many behind-the-scenes elements around Washington are very zealous of the public interest in the legal construction of that phrase. In the past it has been invoked on various grounds, usually in staid, cut-and-dried legal procedure to acquire a right-of-way, or a piece of land needed for an important public purpose, or some other such object. Nowadays, when federal authority goes out to the byways in every county—trying a county officer here for enforcing a municipal ordinance, overriding a state agency there for some other reason—that term "the public interest" is a very live proposition.

Certain officials have argued that it gave the Government the right to tell a business man not only what he must do in his plant, but what he can or cannot do with the timber tract on his place in the country. In short, to say that a given activity is "affected with the public interest," as the term reads, is about the same as saying "infected" with it, in view of the unpleasant consequences that may follow.

War savings for public power

THE public is realizing more and more that, when federal authority steps in, local authority steps out, and the Smith-Bone bill is full of federal authority. Ostensibly this authority would extend only to public power, but consider some interpretations of its innocent language:

It creates a federal power czar, who could buy in at his own price virtually, private power companies, incidentally using national funds, including war savings, for the purpose. He could sell indiscriminately the same or other properties, and, furthermore, he could exercise his own independent judgment as to whether the power services taken over should be permitted to go on serving their old communities or not.

According to the bill, the acquired properties to be sold only to public bodies—in short, no private enterprise could buy in, even if the community wanted it that way. This language has been construed as paving the way for public-power officials to force public ownership on politically independent



CESSNA PHOTO

Photograph of a Bottleneck

Girl riveters at the Cessna Aircraft Company plant used to wear sweater and slack outfits of the sort that is so becoming to the young woman on the right. The company banned them. The management said they slowed down production. The alert young man in the center shows why. The young woman on the left wears the standard coverall uniform that is now prescribed for all Cessna's woman workers. Now the men don't jump. But production does. Thus do small things affect production

What Mrs. Walenska learned

ABOUT *WINNING* *THE WAR*



FAITHFUL MARYSIA WALENSKA, American, isn't forgetting Pearl Harbor... *or... Warsaw.*

So she put aside her personal fears. Fears for her daily bread... when she learned they were going to take away the laundry bleach so vital to this plant in which she works.

Marysia may not know it's the *chlorine*, used in making laundry bleach, our arsenals need. But after 30 years over here... she *does* know our American ingenuity... our will to *win*.

So Marysia Walenska, American, kept her faith. And her boss upstairs did come through.

He investigated—then installed—two strange-looking machines. Machines that turn plain water and familiar *salt* into a perfect laundry bleach! One

of these—International's exclusive Lixator—is an old hand at industrial magic... transforming inexpensive rock salt into *crystal clear, fully saturated brine!*

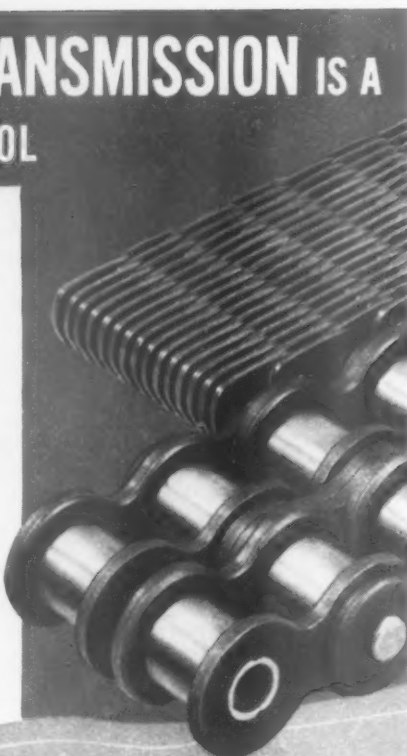
To leaders in glass-making, tanning and dyeing... in the meat-packing and canning industries... the byword for *salt* is International. And salt or salt processes by International serve in scores of other industries... in stock feeding and agriculture... for clearing highways—and air field runways—of treacherous snow and ice!

Would you like to learn more about salt? Send for the facts in a booklet, "*Salt by International.*" International Salt Co., Inc., Scranton, Pa. Rock salt, evaporated salt, lixate brine, salt tablets, Sterling table salt—for industry, agriculture, home.

EFFICIENT POWER TRANSMISSION IS A VITAL PRODUCTION TOOL

Give Your Drives the Benefit of Morse Design and Engineering

Efficient power transmission is as vital a production tool as any machine. Don't let poor drives waste machine time. Morse "Engineered to the job" Silent and Roller Chain Drives transmit power at practically 100% efficiency. With the Morse principle of "Teeth not Tension," there is no slippage, no power waste. Regardless of speeds, shocks, overloads and continuous runs, Morse Chain Drives will keep your machines rolling at top-rated capacity. Call your local Morse Drive Engineer—he stands ready to serve your war needs.



SILENT CHAINS ROLLER CHAINS FLEXIBLE COUPLINGS CLUTCHES
MORSE positive DRIVES
MORSE CHAIN COMPANY ITHACA N. Y. DIVISION BORG-WARNER CORP.

VICTORY—and YOU!

ANNOUNCING a series of six significant radio programs, presented by 206 stations of the Mutual Broadcasting System in cooperation with the United States Chamber of Commerce.

A thought-provoking description of tomorrow's better world—as related to Eric A. Johnston, National Chamber President, by top spokesmen of six major industries.

Beginning Thursday, October 8, 9:15-9:30 p.m., Eastern War Time, the series will feature Mr. Johnston in discussions on post-war prospects for American business with the following industry authorities:

Alfred P. Sloan, Jr.,
Chairman of the Board, General Motors Corporation

Dan W. Kimball,
President, The Associated General Contractors of America, Inc.

Donald W. Douglas,
President, Douglas Aircraft Co., Inc., and President, The Aircraft War Production Council

Roy F. Hendrickson,
Administrator, Agricultural Marketing Administration, Department of Agriculture

R. V. Fletcher,
Vice President and General Counsel, Association of American Railroads

Charles E. Wilson,
President, General Electric Company

ON YOUR LOCAL MUTUAL STATION:

Every Thursday evening, 9:15-9:30 o'clock, Eastern War Time, beginning October 8

communities whether they wanted it or not.

In fact, one company in the power field menaced by the bill derives 90 per cent of its revenues from areas where public ownership has been defeated. Its president started in the utility business at 17. He drove a team, then worked as laborer, then with a wiring crew, and so on up the ladder.

(Parenthetically, under government management, he couldn't have done that. He probably would have had to acquire an engineering degree from a school approved by the dominant clique managing the property under the government aegis, then perhaps have taken a civil service examination and some other things. He might still be digging holes in that case.)

The company—valued today at \$70,000,000—represents the invested savings of thousands in every walk of life. This is not large compared to the figures thrown around in Washington, but this is earned money at work. The enterprise pays its dues to the Government, too—more than a fifth of its revenue in taxes.

Power czar—new style

IN THIS respect, like its contemporaries elsewhere, it is decidedly handicapped when competing with public power enterprises which can be built without regard to initial outlay. The money in that case comes from some public treasury. The public enterprise doesn't have to charge a rate that will reimburse this outlay because nobody these days seriously worries about that aspect of public enterprise. It can hire as many people as it wants.

With these advantages, and those the bill adds, the power czar could build up a little empire where no private power enterprise could flourish and no private enterprise of any kind—plant, factory or whatever—could get power except on the Government's terms.

It is far-fetched, of course, but suppose a public official got mad at a whole section of his domain—maybe for voting the wrong way. He could certainly strike back by shutting off the power in a city, if he chose, and there would be no recourse. If a private company did that, the state, the city or the federal Government could step right in.

With such possibilities in the offing, leading enthusiasts for municipal ownership in the power field do not approve the Smith-Bone bill very heartily. They can see too well the possibility that bureaucrats, responsible to no local authority, might easily be found some day, under the same type of law, in other branches of activity, and they don't like the idea.

Washington domination is getting a daily workout in public under war stresses. There is scarcely a firm executive, or small shop owner, who isn't aware of Washington's heavy hand day and night. They readily submit only in the belief that it is in a good cause—Victory.

Plants frequently are taken over by a federal government agency, whose representative can fire the manager if he chooses. It has happened. Today

more and more of the nation's private enterprise is leaning heavily on federal funds, although against its will in many cases.

Those who hope that this is only for the duration of the war feel much alarm when they contemplate the possibility of such broad powers as the Smith-Bone bill proposes being superimposed on the already unprecedented authority the central Government exercises nowadays as a matter-of-course.

Retrenchment may help

THERE is one fairly promising prospect, in a way. At the rate of federal expenditure, assuming any real retrenchment were to be undertaken when the war ends, money for such further experiments in socialized activity will be scarce.

Already priorities are entering the public power picture to a degree. Even so, many such projects are going ahead, and as the current proposed bill indicates, the question of money is no object, at least to the sponsors.

In fact, were it not for the suspicions aroused by some of the revelations concerning this particular piece of legislation, it is doubtful if it would have attracted much attention just as a power policy matter.

It is simply a sign of the times that so many people, not moved one way or another by a matter of public power, are deeply stirred at the prospect of further federal encroachment on the little boundary left which a business man can look at and say to himself:

At least here I am still my own boss—if I have the stuff I can make my own way, and if I haven't, I will just see what I can do.

Victory—and You

SPECIFIC products which American business and industry will make available to the consumer at the end of the war, are to be described in a series of six weekly broadcasts entitled "Victory—and You" to be presented by the United States Chamber of Commerce with the cooperation of 206 stations of the Mutual Broadcasting System beginning October 8.

These descriptions of tomorrow's better world will feature Eric A. Johnston, National Chamber president, in discussions with:

- Alfred P. Sloan, Jr., chairman of the board, General Motors Corporation.
- Dan W. Kimball, president, The Associated General Contractors of America, Inc.
- Donald W. Douglas, president, Douglas Aircraft Co., Inc., and president, The Aircraft War Production Council.
- Roy F. Hendrickson, administrator, Agricultural Marketing Administration, Department of Agriculture.
- R. V. Fletcher, vice president and general counsel, Association of American Railroads.
- Charles E. Wilson, president, General Electric Company.



OUT of the night, death and destruction plunge toward earth.

This was the night foreseen long before... the night filled with bombers sweeping back and forth dropping their terrible cargoes... the night filled with fighter planes darting swiftly after the enemy... this was the night for which the people had prepared.

Now they are safe in shelters, safe under steel and concrete domes.

Your business, too, is constantly threatened with sudden, catastrophic raids. Without the slightest warning any customer—even the largest and most trusted—may become insolvent, imposing a serious loss on you and other creditors.

Against such risk, you need the protection of

AMERICAN CREDIT INSURANCE

An AMERICAN CREDIT policy is the strategic defense employed by thousands of manufacturers and wholesalers to protect working capital and profits against unforeseen credit losses. AMERICAN CREDIT guarantees payment of accounts receivable... guarantees reimbursement for losses caused by the insolvency of customers.

Write Dept. N-9 for your FREE copy of our new brochure "The A-B-C of Credit Insurance."



J.F. McFadden, President

First National
Bank Bldg.,
Baltimore

49 YEARS
IN BUSINESS

"Guarantees Payment of Your Accounts Receivable"

OFFICES IN PRINCIPAL CITIES OF UNITED STATES AND CANADA

Take a Little—Give a Little

(Continued from page 61)

that situation develops, you may find the leader fighting to preserve the union while the rank and file of the committee are thinking in terms of dollars in the pay envelope. The pull of money is strong. More than once an indignant union committee has first refused an employer's offer, then agreed to submit it, declaring firmly that the membership would never accept, and then seen it accepted.

★ ★ ★

THE LEGAL profession is changing as a result of the new era in labor relations. A leader of the bar in a large city in New York state said to me one day:

"If you had told me a half dozen years ago that I and my associates would shortly be devoting a large part of our time to negotiating union labor contracts for our clients, I should have thought that you were out of your head. Yet, the firm which I head has had a part in 24 such negotiations within the past three months."

An attorney who appeared in a panel case in which I was sitting, told me that he was one of seven lawyers associated with his firm who gave their full time to labor cases. Another lawyer, now in government service but looking forward to a prosperous private practice, had this to say of the future:

"Two things are going chiefly to engage the attention of the lawyers of the future, labor relations and taxation. Both will call for highly trained specialists."

"I suppose," I said to a company lawyer, "that you are in on the money side of this branch of the law."

"Don't you believe it," he answered. "I could name a dozen men in my home city who are making large incomes as counsel for labor unions. In some cases, they have retainers from a number of such organizations and special fees for handling special cases."

★ ★ ★

UNIONS frequently ask much more than they hope to get. A mediator once asked a union official why and got this answer:

"You never eat your soup as hot as you cook it, do you?"

★ ★ ★

BOTH SIDES in a wage controversy hesitate to commit themselves to definite figures. In one case, management had offered a two-cent increase.

"What! A lousy two cents?" cried a union leader. "Why don't you offer us something substantial?"

When the conciliator's turn came, he said:

"I know the meaning of 'lousy'! It's two cents an hour. Now, why don't you define 'substantial'?"

He wouldn't.

Two cents an hour does sound small but management thinks of it as two cents multiplied by 40 hours a week, times 52 weeks a year, times 1,000 workers. It knows, too, that, with overtime, two cents become three. That can upset a budget.

★ ★ ★

UNION leaders frequently have a gift for picturesque expression. Both groups and the conciliator were eating at a long table in a small town after a discussion

which included cost of living. Said a voice which filled the room:

"Here I am sitting in a hotel eating steak when the kids are home gnawing the putty out of the window panes."

★ ★ ★

NEW UNIONS are likely to expect, or at least to hope, that they can get all their demands wrapped in one package and delivered all at once after an initial contract negotiation.

Older union members know that negotiations are a continuing process, sometimes one of trial and error. What looked good in 1941 hasn't worked very well. In one case, vacations were an important issue. For five or six years, the unions had fought for them unsuccessfully.

Finally the president said to the conciliators: "Tell you what I'll do. I'll give every one who has worked a year on December 15 a week's bonus on the pay day before Christmas. If it'll make any one any happier, I'll label it 'in lieu of vacation'."

The union committee promptly began to find fault. They wanted (or some did) time away from the plant and with pay. One man wanted to drive to his wife's folks and another wanted to go fishing. Finally, I said:

"You have spent five years talking vacations and you've never gained an inch. Now you've got something. Maybe it isn't what you want, but isn't it wise to take it and wait for next year?"

A representative of A. F. of L. International broke in: "The mediator is right. Take the offer, say 'Thank You' and bear in mind that 1943 is another year."



"I'm going to let him go....The other night he sold me two policies before I could wake him up"



The right to COME and GO when we please

THIS is a fight-to-the-finish we are in—a grim war for survival. The stakes are the highest in all the history of mankind. And one of them is the American's traditional right to come and go when he pleases.

Our enemies say that they will erase this birthright of ours; that they'll tell us when we can come and go. But they'll find that it's easier said than done.

No goose-stepping Nazi; no squint-eyed Jap is going to tell Americans that they can't run down to the seashore or vacation in the mountains or take the children to visit Aunt Mary back home. For we are going to win this war!

How? With the bravery and the brilliance of our men in uniform. With the toil and sweat of millions of loyal workers in forest, field, factory and mine. With our genius for invention, organization and production. With the willing sacrifices of every patriotic American.

Yes, we will win this war—even if we have to lay aside for awhile our right to come and go when we please.

That's why the officers and employees of the Southern Railway System have solemnly pledged their all to the winning of the war. That's why our entire transportation plant; all our resources of man-power and experience are enlisted for the duration in the service of the nation. That's why we put the transportation needs of Uncle Sam first—before any and every civilian need—that your right to come and go when you please may be preserved for you and for the generations of Americans yet to come.

In the first seven months of this year we have carried almost 600,000 men in uniform, all moving under orders. They traveled in 24,915 coaches and Pullmans; in 1,564 special trains and 5,563 extra cars attached to our regular passenger trains. And these figures do not include the additional hundreds of thousands who have traveled over our lines on furlough or in small groups on transfer orders.

That's why our trains are often late—troop trains and war freight have the right of way. That's why they are often crowded—so many boys want to visit home at the same time. That's why we have pressed old coaches into service—in our desperate effort to help everyone to come and go when they please. That's why we have had to lower temporarily the standards of service of which we have been so proud. And that's the way we know you want it to be.

Your willing sacrifices of some travel comforts and conveniences are more than a personal contribution to the war effort. They are an inspiration to those of us who railroad to plan for the day when victory comes; to plan for a better Southern Railway System better to "Serve the South". For, with victory, we know that a new day will come to our Southland; a new day of prosperity and happiness and peace; a new day with freedom to come and go when you please.

That is worth fighting for!

Emory E. Ramey
President.

SOUTHERN RAILWAY
SYSTEM

T H E S O U T H E R N S E R V E S T H E S O U T H

A Grand Canyon of Work

(Continued from page 64)
population as the tonnage of ore increased. Eveleth, Virginia, Buhl, Chisholm, Hibbing, and a dozen other communities grew up.

Unlike most of the ores in the other Lake Superior districts, those of higher quality in the Missabi lie loosely in flat beds. Nature was equally kind in leaving the ore so close to the system of cheap transportation which floats it down to the region which possesses the coal, and in spreading limestone on islands along the way, with which to flux the ore when it reached the smelters.

In the Missabi the ore is scooped up with shovels which lift 15 tons at a bite.

Greatest of the pits, and the greatest of man's excavations anywhere, is the Hull-Rust-Mahoning mine near Hibbing. Within the past year or so the amount of material taken out of it passed that of the Panama Canal. The Hull-Rust portion is operated by Oliver, the Mahoning portion by Pickands-Mather, and there are adjacent pits which run into it, such as the Sellers (also Oliver) and the Susquehanna (operated by Republic Steel).

Today this greatest of mines is three miles long, a mile wide at its widest and 375 feet deep at its deepest. The visitor looks suddenly out into a gulf, its sides and bottom the rusty reds and

violets of iron, the distant slopes fading to lavender in the haze. He thinks of the canyons of the West, and of this as the Grand Canyon of Work.

Mr. Coolidge summed it up

ITS floor and slopes are a punched-in railroad yard. From its depths rise the smoke and steam of a half-dozen trains, and to the ear come distant whistles and bells and the faint clatter of power shovels and shifting cars. On a platform built for his visit stood Calvin Coolidge, and there he made his famous remark: "That's a pretty big hole."

Last year 22,000,000 tons of ore were shipped from this mine, or mines, a third of Missabi's and more than a fifth of America's.

Several other open-pit mines are almost as big as Hull-Rust. One of these is the Adams-Spruce, an Oliver operation near Eveleth, itself a combination of seven old ones. Some of its tonnage comes from underground, but most of it is hauled up on a mile-long conveyor belt. The pit was narrow and the tracks were in the way of the shovels. Today a scraper running on cables drags the ore to the crusher and the belt picks up the fine stuff and moves it in continuous stream to the rim.

Adams-Spruce is one mine which has not missed a year of production since 1894, and its 1941 record was 3,477,000 tons. A couple of miles away is the Leonidas, 650 feet down, the deepest mine on the ore body.

A number of the smaller mines are now being worked by power shovel and motor truck. The combination of Diesels and large tires made possible vehicles weighing 15 tons empty and 30 tons loaded.

The Missabi's mines are corporately pretty concentrated in their operations, but the ownerships of the fees are complex and scattered. A year ago only about 20 concerns were taking out ore. This year a few more came in, chiefly small lessees with motor trucks, including a building contractor or two. Largest of the fee owners is the state of Minnesota through its holdings of school and university lands. Next largest is Oliver, with its Rockefeller inheritance. The Great Northern and Northern Pacific railroads are also important lessors. The remainder of the owners, except for steel companies like Bethlehem and Jones & Laughlin which contract with shipping companies to work the mines, are made up of many estates, old lumber companies, and individuals.

Leases on the state-owned mineral properties are for 50 years and, since a great many of these were made in the '90s, a number of them are expiring this year and more will be shortly. Royalties range from 12½ cents a ton to a dollar or thereabouts. Most of the early ones were at 25 cents, including the state's leases, but the present law provides for royalty on the latter on a sliding scale. In the early days the ore ran 66 per cent iron, cargoes were still guaranteed to be 58 per cent iron in the early 1900's, but today the standard grade is down to 51.5 per cent for non-Bessemer.

BELLRINGERS

No. 1135

TO BELDEN MANUFACTURING COMPANY

Chicago

Please remit dividend payable to me September 1st, 1942, as follows:

UNITED STATES WAR SAVINGS BONDS—SERIES E

Number of Bonds	Denomination (Maturity Value)	Issue Price (Each Bond)	Amount (Total Cost)
	\$25.00	\$18.75	\$
	\$50.00	\$37.50	\$
	\$100.00	\$75.00	\$
	\$500.00	\$375.00	\$
	\$1,000.00	\$750.00	\$

Total amount of purchase \$.....

CAUTION—No one person may hold War (Defense) Savings Bonds of Series E originally issued in any one calendar year in his name alone or with another as co-owner to an amount exceeding \$5,000 (maturity value). See "Instructions" on reverse side.

UNITED STATES WAR SAVINGS STAMPS . . . \$.....

CASH \$.....

Bonds to be inscribed (see other side) (Please print or write legibly):
 ("Miss" or "Mrs." must be indicated whenever female name appears)

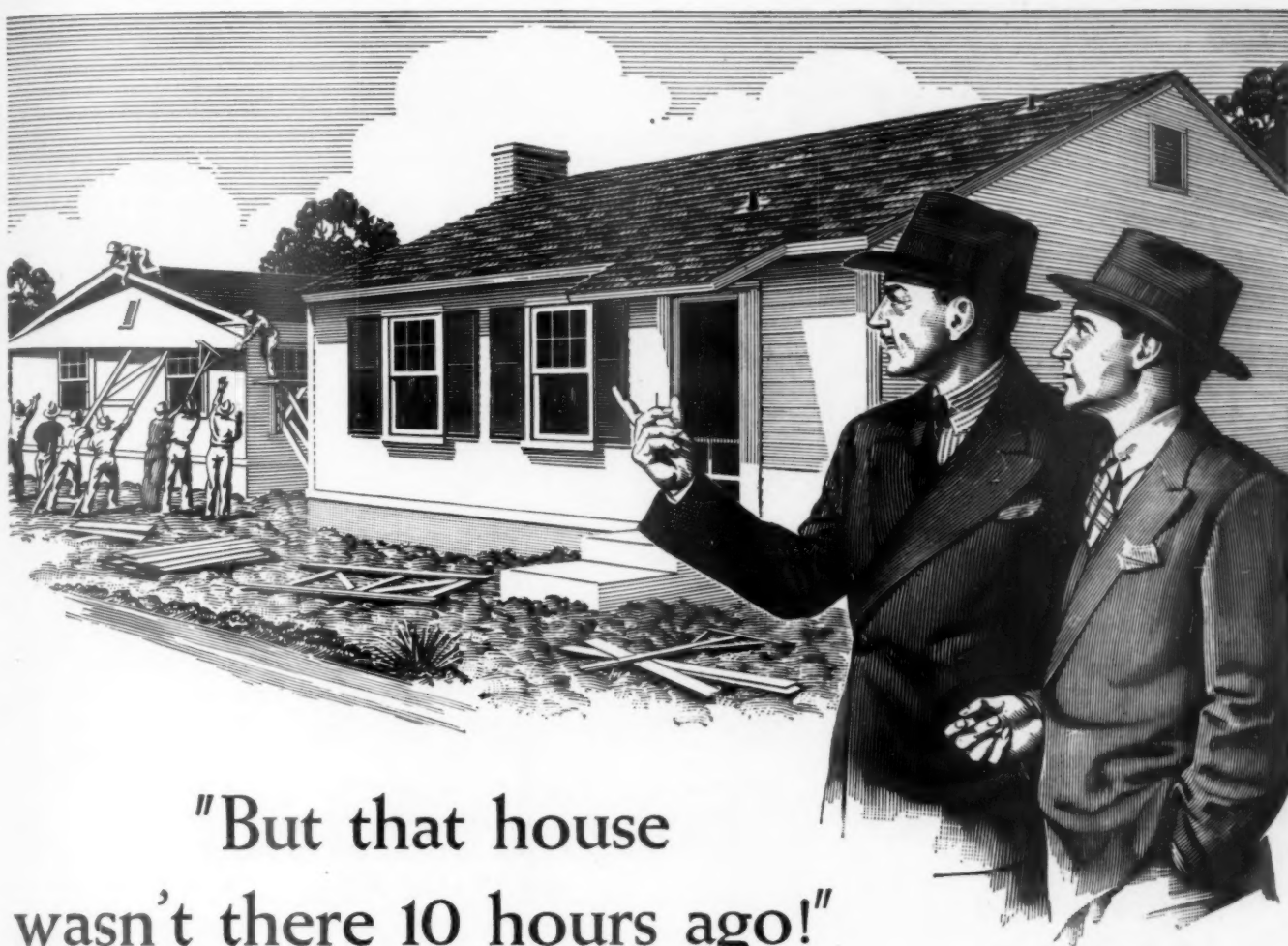
Stockholders Buy War Bonds Too

A new plan for selling war bonds which could raise as much as \$500,000,000 a year, provided it is generally accepted by other firms, has been successfully initiated by the Belden Manufacturing Company of Chicago.

When the income report to stockholders was mailed, each letter carried a blank for ordering War Savings Bonds or Stamps. There was no letter or effort to influence stockholders. If no bond was ordered, the stockholder automatically received his cash dividend. The offer closed in 21 days with 10.6 per cent of the dividend declaration subscribed for bonds.

Officials point out that the Belden plan provides a convenient way for stockholders to make income allotment plans. Another convenient detail was setting the dividend at 37½ cents a share which gave stockholders of every 50 share unit a return equal to the purchase price of a \$25 bond.

For its idea and contribution, the company received a Treasury Department citation "for distinguished service rendered in behalf of the national war savings program." The company has also received the Treasury's Minute Man Flag because the employees contributed 90 per cent cooperation in buying war bonds and stamps.



"But that house
wasn't there 10 hours ago!"

Here's the story of a lumber merchant who thought he ought to do something about war housing. "In ten hours," he said to the U. S. Navy, "I can put up a six-room house, ready for occupancy, complete to the last curtain rod and brick in the fireplace—not a portable, mind you, but a finished, livable residence."

The Navy replied: "Show us." He did—in nine and one-half hours flat, before as critical a quorum of housing experts as could be mustered in the nation's capital—and got the government order.

But—this twentieth-century Aladdin needed to buy in volume to create his pre-

fabricated wonder-house on the large scale required. He could have credit, certainly, but he wanted to buy for cash to speed the whole operation and to retain complete initiative in determining when, where and how to make his purchases. His local bank called in the Chase; a substantial loan was made quickly to the manufacturer—in which our correspondent bank, of course, participates. Now, every day, rows of houses are springing up where vitally needed.

This is but one among hundreds of actual instances where bank loans are definitely speeding, simplifying, furthering the war effort along the industrial front.

THE CHASE NATIONAL BANK
OF THE CITY OF NEW YORK

General Foods Declares Preferred Dividend

Directors of General Foods Corporation, at a meeting held September 16, 1942, declared a quarterly dividend of \$1.12½ a share on the 150,000 outstanding shares of the company's \$4.50 Cumulative Preferred Stock. The dividend is payable November 2, 1942, to holders of record October 9, 1942.

* * *

Among the products of General Foods are: Baker's Cocoa—Baker's Coconut—Baker's Premium Chocolate—Birds Eye Frosted Foods—Calumet Baking Powder—Certo—Diamond Crystal Salt—Grape-Nuts—Grape-Nuts Flakes—Grape-Nuts Wheat-Meal—Jell-O—Jell-O Freezing Mix—Jell-O Ice Cream Powder—Jell-O Pudding—Kaffee Hag Coffee—La France—Log Cabin Syrup—Maxwell House Coffee—Maxwell House Tea—Minute Tapioca—Post's 40% Bran Flakes—Post Toasties—Postum—Sanka Coffee—Satina—Sure-Jell—Swans Down Cake Flour—Whole Bran Shreds.

GENERAL FOODS

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★ ★ ★ ★ ★

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Chamber of Commerce of the United States

1615 H. Street N. W.
Washington, D. C.

★ ★ ★ ★ ★

PACIFIC GAS AND ELECTRIC CO.

DIVIDEND NOTICE

Common Stock Dividend No. 107

A cash dividend declared by the Board of Directors on September 16, 1942, for the quarter ending September 30, 1942, equal to 2% of its par value, will be paid upon the Common Capital Stock of this Company by check on October 15, 1942, to shareholders of record at the close of business on September 30, 1942. The Transfer Books will not be closed.

D. H. FOOTE, Secretary-Treasurer
San Francisco, California.

Much has been written of taxation in the Missabi country, itself as phenomenal as everything else there. Just as Missabi means "giant" in the Chippewa tongue, so do Missabi taxes mean giant in any language. For a generation or more, these taxes have been a controversial matter between the state and the mining companies. In some of the communities, the mining companies pay more than 95 per cent of all taxes levied. The tax averages over 70 cents a ton of ore mined, or nearly double the labor cost of taking it out.

The Minnesota theory is that the ore and its extraction are mostly controlled

the War Production Board's materials division a report which stated that, last January, 557,312,000 tons of "direct ore" were still available for open-pit mining on the Missabi, and that if 100,000,000 tons are to be taken from the Lake Superior district each year beginning with 1943, as expected, the Missabi will have to provide 75,000,000 tons and upward annually. After allowing for the output of the underground mines—which cannot be expanded much—the open-pit ore which can go directly into the blast furnaces without treatment will run out in the summer of 1950. (If the war ended next year the life of

★ ★ ★ ★ ★

A Nazi Turned Pale

A dock master told me a story:

This Superior ore is pretty rich, averaging out 51 per cent iron. There is dirt up there that is 63 per cent iron. It won't grow petunias but it makes right nice tanks.

This dock master said he was asked three years ago—while we were still being polite to every foreign visitor—to take some Nazi mining engineers around. They were very gay up to the point where one, patronizingly asked how rich the ore was. (German ore averages out 28 per cent.)

"This stuff right here is 64 per cent," said the American. The Nazis turned pale and one asked for a glass of water.

—SIGRID ARNE writing for "Wide World"

★ ★ ★ ★ ★

outside the state, and that a heavy tax recovers a share of this resource. The companies reply that the rates are forcing the mining of the open-pit and higher-grade ores far more rapidly than the underground and the lower-grade.

The other end of this taxing system may be seen in the elaborate civic structures of the region. Not only are the towns far from being typical mining camps—they are outwardly the world's most luxurious communities for their size. Hibbing's budget for a time rivalled Duluth's. The \$3,800,000 Technical and Vocational High School is the nation's second largest. The \$550,000 Memorial Building includes a large auditorium, a curling rink, a theater, a collection of paintings, and an arena which can seat 5,000 for basketball or 2,500 for hockey. Still a village in government, though with a population of 16,000, Hibbing has six parks, a zoo, and a village hall modeled on Boston's Faneuil. Virginia (pop. 12,000) has a Memorial Building which rivals Hibbing's. Its Technical Building houses a junior college. Buhl (pop. 1,600) has a \$1,750,000 high school.

Some financial ingenuities will be needed in that region when the open-pit mines are worked out, but the question of the life of the ranges is one which concerns us all.

Last spring E. W. Davis, director of the Mines Experiment Station of the University of Minnesota, submitted to

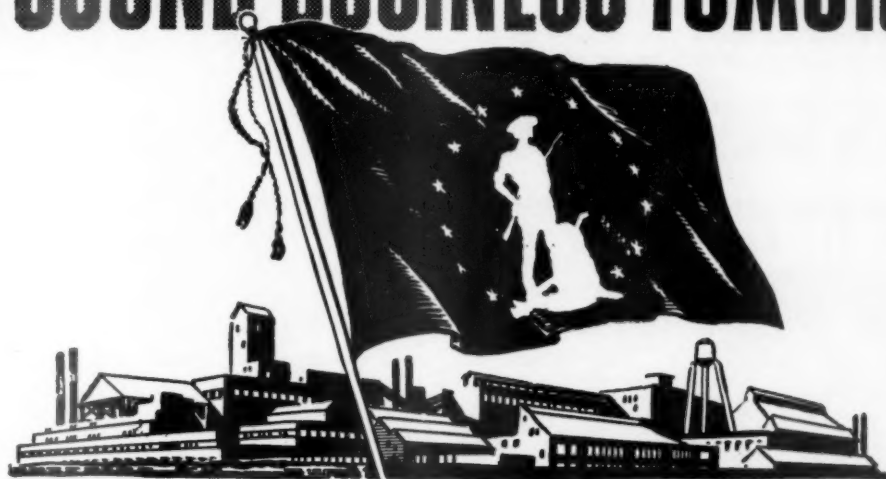
these open pits might be extended well to the end of the 1950's.) Practically all the Missabi ore is now in sight—there have been no discoveries for many years. The other ranges can produce little more than they are shipping now.

"It is shocking to realize," Mr. Davis said, "that in a comparatively few years, the great steel industry dependent upon Lake shipments will find itself short of the necessary ore to meet emergency steel requirements. This means either that a large foreign ore supply must soon be made available, or that the low-grade ores must be developed."

Fortunately the Mines Experiment Station has developed methods of concentrating those lower-grade ores known as the magnetic taconites, and their supply would perhaps last us 200 years. But the treatment plants will take money. Mr. Davis estimates that, at war production rates, 80 plants would be needed, costing \$500,000,000 to \$650,000,000, and employing more than 30,000 men. An industry, in short, on the order of synthetic-rubber. He proposes that little time be lost in making a start.

Whatever the future may hold, Missabi's mining and shipping companies are working under forced draft. The 300-odd vessels will haul 90,000,000 tons of Lake Superior ore this year, may even hit 91,000,000 tons. They will beat the record of 1941 by almost as much as 1941 passed 1929 and the peak years of the last war.

FOR VICTORY TODAY AND SOUND BUSINESS TOMORROW



Get This Flag Flying Now!

This War Savings Flag which flies today over companies, large and small, all across the land means *business*. It means, first, that 10% of the company's gross pay roll is being invested in War Bonds by the workers voluntarily.

It also means that the employees of all these companies are doing their part for Victory . . . by helping to buy the guns, tanks, and planes that America and her allies *must* have to win.

It means that billions of dollars are being diverted from "bidding" for the constantly shrinking stock of goods available, thus putting a brake on inflation. And it means that billions of dollars will be held in readiness for post-war readjustment.

Think what 10% of the national income, saved in War Bonds now, month after month, can buy when the war ends!

For Victory today . . . and prosperity *tomorrow*, keep the War Bond Pay-roll Savings Plan rolling in *your* firm. Get that flag flying now! Your State War Savings Staff Administrator will gladly explain how you may do so.

If your firm has not already installed the Pay-roll Savings Plan, *now is the time to do so*. For full details, plus samples of result-getting literature and promotional helps, write or wire: War Savings Staff, Section F, Treasury Department, 709 Twelfth Street NW., Washington, D. C.



Save With

War Savings Bonds

This Space Is a Contribution to America's All-Out War Program by

NATION'S BUSINESS

Practical Good Neighbor Policy

(Continued from page 38)

perfectly maddening to figure out some apparently slight modification of one's product, get the customer to accept it, and then have the house turn it down. Both the customer and salesman deserve a full explanation and an expression of regret under such circumstances. Otherwise, the salesman may fly off the handle, damn his house, the American system, the United States and all its works, to the manifest benefit of our competitors.

If we observe these simple precautions, I believe we shall get through this war better than we did the last as far as

our relations with Latin America are concerned. We are at least in better position to start with.

Many more Americans speak Spanish or Portuguese and know Latin America than in those days. Latin America knows more about us than it did. It took World War I to break the monopoly London had on the purveying of news to South America. Now our press services have worked up such a record for efficiency and truthfulness that they dominate the newspaper field. There are more Latin-American students here than ever before, at least there were last year. I have heard of

one Argentine family that is getting tired of having its sons' educations disrupted by finding them in Europe at school when war broke out and having to shift them to America (this being the second generation in which the same thing has happened) and it is going to send its scions exclusively to the States from now on.

Close and rapid communication via the Pan American and Panagra air lines is another great help.

Furthermore, although ships are probably just as scarce now as they were in 1918 at least we have a merchant marine of our own.

The United States was then so dependent on foreign shipping that I remember the thrill of running across a schooner flying the American flag when I was rambling around the *boca* in Buenos Aires one Sunday afternoon in 1916. It was one grand scramble to get shipping space, rates soared, and goods frequently did not reach South America for months after they left the factory. I also believe that there is now a pretty good, though red-tape-bound, system of freight priorities, so that ports are not so confused as during the last war.

During the World War prices were what the traffic would bear, which was understandable, too, because there were no restrictions on domestic prices, the exporter had to bid to get goods, his expenses were high, he had had little experience in export credits, and customers were thankful to get anything at any price.

Trade Crashed After Armistice

AS a matter of fact most of the exporters, especially the newer houses, did not get enough meat on their bones to stand the crash after the Armistice. The carnage was fearful, as customer after customer took advantage of loopholes to wriggle out of contracts and leave terrific quantities of unsalable merchandise "for account" in the Latin-American custom houses.

Even today, with prices strictly limited because our Government allows only a small mark-up for export, it will take character on the part of the customer to accept and pay for goods in transit, with 15 or 20 per cent war risk insurance charges, when merchandise shipped after the Armistice will probably only have to pay one per cent.

No doubt, this time, the transition from a war to a peace economy will be cushioned by the fact that our Government has guaranteed to take all that can be produced of a great many Latin-American products for a year or two or three after the war ends.

We came out of the last war a heavily creditor nation. After this war, very likely all nations will be equally "broke" and loaded down with internal debt, and "lend-lease" will simply be written off. It occurs to me that, for purposes of international trade, we may be better off than from 1919 on, because we shall all start from scratch, instead of having, as we had then, such a "favorable" balance that we were stifled with our own riches and embarrassed when people tried to pay off their debts.



for today's wings of Victory and tomorrow's ports of Peace

American war birds are taking wing—flight after flight—in swarms they are heading to destinations at every point of the compass. Ahead of them are going air warports—the kind that only American ingenuity can quickly engineer, then as quickly produce. These airports are complete to afford most every facility and are designed for compact shipment and speedy installation. And—they are as readily dismantled and reinstalled. Butler engineers and craftsmen with war-sharpened skill and augmented factory facilities are making, for today's wings of Victory, complete warports which will excel as the peace ports of tomorrow.

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Address _____

City _____

State _____

Uncle Sam Will TAG YOU!

(Continued from page 54)

will be women when production reaches peak.

List non-essential industries or jobs

THE board might prepare a list of jobs such as barbering, waiting tables, laundering, bartending, clerking in stores and the like. It would then become impossible for a man of draft age to seek employment at any of these tasks. The law might even prohibit any person from seeking such employment if his or her capabilities could be used in a war plant.

Forbid deferment to men in essential industry who seek new jobs

SUCH a ruling would prevent hopping about from place to place. Before the recent freezing order, \$4-a-day copper miners were jumping to \$8- or \$10-a-day construction jobs or shipyards or munitions plants. Dairy hands getting \$70 a month are switching to defense plants where they get \$200. Both examples are of men who might be deferred for occupational reasons. If they jump the job, draft board would re-classify them for military service.

Freeze all labor in essential occupations

NO one is eager to take the onus for such a drastic measure. The buck will probably be passed to Congress, but it is difficult to foresee anything but eventual "freezing of manpower" by legislative action. Attempts will be made to soften the blow by so-called wage stabilization and subsidies to workers in lower wage groups, but it will be impossible to level out the entire wage structure. An incident in California illustrates the difficulty. Miners, aviation workers, shipbuilders, farm hands and munitions plant workers are all on a different wage basis. It is natural for them to seek the highest level and many of them can be interchanged to a considerable degree—that is, all have mechanical ability or can be easily trained. When numbers of one group began moving, W.P.B. officials arranged to raise their wages so they would stay on the first job. But O.P.A. said "no."

Another unpleasant conflict is between aviation and auto workers. Many of the latter, now converted to aviation, are making more money than original aviation workers. The latter won't like either wage freezing or job freezing.

Freezing would also stop pirating. All the major belligerents except U.S. have frozen their citizens on essential jobs.

Transferring men from non-essential to war industry jobs

THIS is even more difficult than job-freezing. Where the plants were con-

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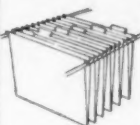
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Send me FREE sample of your Oxford Pendaflex folder
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Up to 24 crisp sheets go at minimum Air Mail postage rate. Paper in choice of 2 weights printed with Air Mail insignia, 4 weights in plain Air Mail papers; 4 envelope sizes with International Air Mail marking. See them at all leading Stationers.

EATON PAPER CORPORATION
Pittsfield, Mass.



"I Am Ashamed to Give the Figure"

(Continued from page 33)

went to every corner of the world.

One division coordinated speaking activities, touring selected groups, arranging mass meetings, and conducting war conferences from coast to coast.

The Four Minute Men alone commanded the services of 75,000 volunteer speakers, who made a total of 755,000 speeches.

Twenty-three major foreign language groups, organized compactly and efficiently, carried specific messages of unity and enthusiasm to America's adopted sons and daughters.

What a job they did! Out of the millions whose loyalty was so distrusted and attacked, less than 6,000 were interned, less than 2,000 arrested under the provisions of the Espionage Act. Many of these were acquitted.

In nothing was the value of centralized control more apparent than in the case of motion pictures. Government's one approach to Hollywood was through the C.P.I., and all films from the battle fields—British, French and Italian as well as our own—were assembled and released by the Committee. From domestic showings alone, under a fair plan of distribution, we made \$1,000,000, which helped pay for campaigns in foreign countries.

Volunteers saved money

SUMMARIZING other major activities, the C.P.I. mobilized the nation's advertising forces for the drive that obtained free space to the value of millions; assembled artists on a volunteer basis for posters and window cards; ran a great central information bureau in Washington; met the needs of the rural press, the religious press, the labor press, and issued the *Official Bulletin*, a government gazette that saved millions in time and postage.

Turning to the outside world, our task was three-fold. First, we wanted to win the friendship and support of the neutral nations.

Second, the war-weary peoples of England, France and Italy had to be bucked up by daily reports on our war progress.

Third, the soldiers and civilians of the Central Powers had to be reached with the truths of the war.

Opening offices in every country except Germany, we took over the government wireless, and poured a steady stream of American news into every channel of international communication. Asia, Africa and Australia were reached no less effectively than Europe and South America. This daily wireless and cable service was supplemented by a mail service of special articles and illustrations.

Reading rooms were opened, classes in English started, and to our representatives went films showing our cantonments, shipyards, training stations, war ships and marching thousands, together with motion pictures illustrative of our social and industrial progress, all to be

retitled in the language of the land, and shown in theaters, public squares and open fields.

Likewise we supplied pamphlets for translation and distribution, sent speakers selected from our foreign born to lecture in universities, schools, and even villages. Newspaper men of neutral nations were brought to the United States that they might report truly to their people as to American unity, resolve and invincibility.

Our main attack on German censor-

ship was through Switzerland, Denmark and Holland, although we did not neglect the use of mortar guns loaded with paper bullets and pamphlet-carrying airplanes.

Slowly but surely our facts crumbled the foundation of lies that upheld the structure of Prussian militarism, even as they swept away German misrepresentations in every neutral country in the world.

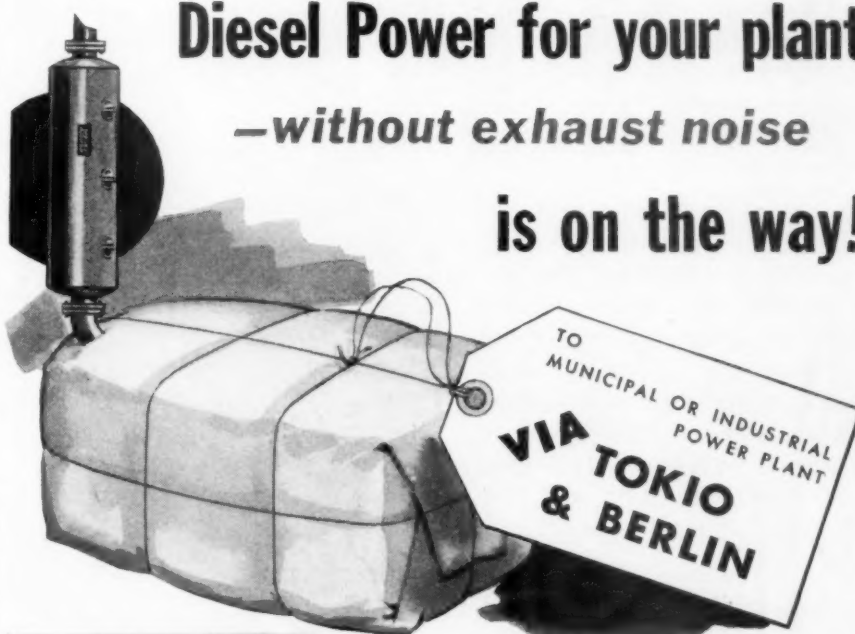
And the cost of it all? In this day of billions I am almost ashamed to give the figure.

For the 18 months of the war, during which the C.P.I. covered the whole civilized world, the total expenditures were exactly \$4,912,553.

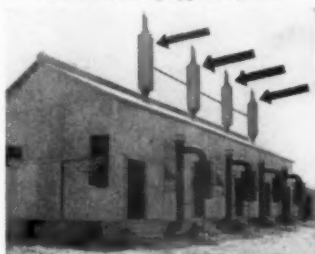
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New municipal plant at Brooklyn, Iowa, with Snubber-equipped engines.



Four Snubbers at Shell Oil Company's East Cromwell, Okla., plant

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SNUBBERS

If that Diesel engine you want is hard to get, be patient. There are a couple of dictators holding up shipment.

When you do get it, be sure it's equipped with a Burgess Exhaust Snubber. Your neighbors will sleep better, and you'll appreciate having a quiet exhaust without any sacrifice of engine efficiency.

You can't beat a Burgess Snubber for efficient elimination of exhaust noise. Operating on the Burgess snubbing principle, it prevents—not muffles—the noise. So don't ask for a "muffler"—specify a Snubber. Hundreds of installations in hotels, hospitals, office buildings, municipal plants, and other critical locations are proof of its success. Burgess Battery Company, Acoustic Division, 2823-F W. Roscoe St., Chicago.

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THROW back your shoulders, son; be proud! Things a lot bigger and more important than Dad's old suit are headed your way. Things like liberty, the right to speak your mind, to worship as you please. These are the most precious hand-me-downs in history—and we're fighting to *make sure* that you get them.

But some hand-me-downs we're *not* going to pass along—simply because we can do better. No one can improve on freedom—but we can improve some of the things that let us express it. Air conditioning, that gives us free choice of the climate we want; television, that frees us to look beyond the horizon. Electronics, plastics—and lots more that are going to make your life freer, fuller, richer.

It's an exciting, wonderful world you're growing up to, Junior. Because we're handing down to you the same things that have always made America strong and great—and because we're adding many new things to make it even more wonderful. So, when you're thinking about these better hand-me-downs, think of us. We're thinking of you! *General Electric Company, Schenectady, N. Y.*

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The volume of General Electric war production is so high and the degree of secrecy required is so great that we cannot tell you about it now. When it can be told we believe that the story of industry's developments during the war years will make one of the most fascinating chapters in the history of industrial progress.



GENERAL



ELECTRIC

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Take advantage of Continental Can Company's resources, facilities and organization that are now helping many industries maintain their war production schedules.

Today we are producing war material as prime and sub-contractors in many of our plants throughout the country. The manufacture of war items by mass production methods (sheet-metal work, stampings and sub-assemblies) is made to order for our plants and personnel. Here is where our 37 years' experience in making metal containers works to advantage. We have recently prepared a portfolio showing the highlights of how our experience and organization are fitted for war work. We will be glad to send a representative to review it with you.

Here is what we offer:

- ▶ 45 plants conveniently located from coast to coast.
- ▶ 7,738,500 square feet of floor space, part of which is available for additional war work.
- ▶ 16,000 workers (including machinists, engineers, drafts-

men, tool and die makers) skilled in mass production of metal units.

▶ A competent sales staff operating out of 27 local sales offices who expedited the handling of an annual business in 1941 amounting to \$136,652,016.

▶ A War Products Council organized to give you quick action . . . to help you or tell you promptly what you want to know about Continental's ability to handle any job. Write, wire or phone War Products Council, Continental Can Company, 100 East 42nd Street, New York City, or any sales office.

. . .

NOTE: Continental is still turning out "packages to protect America"—cans to carry needed food to our armed forces, to our Allies, and into American homes. We will continue to make these cans—as well as other containers for essential products as defined by WPB.

CONTINENTAL CAN COMPANY

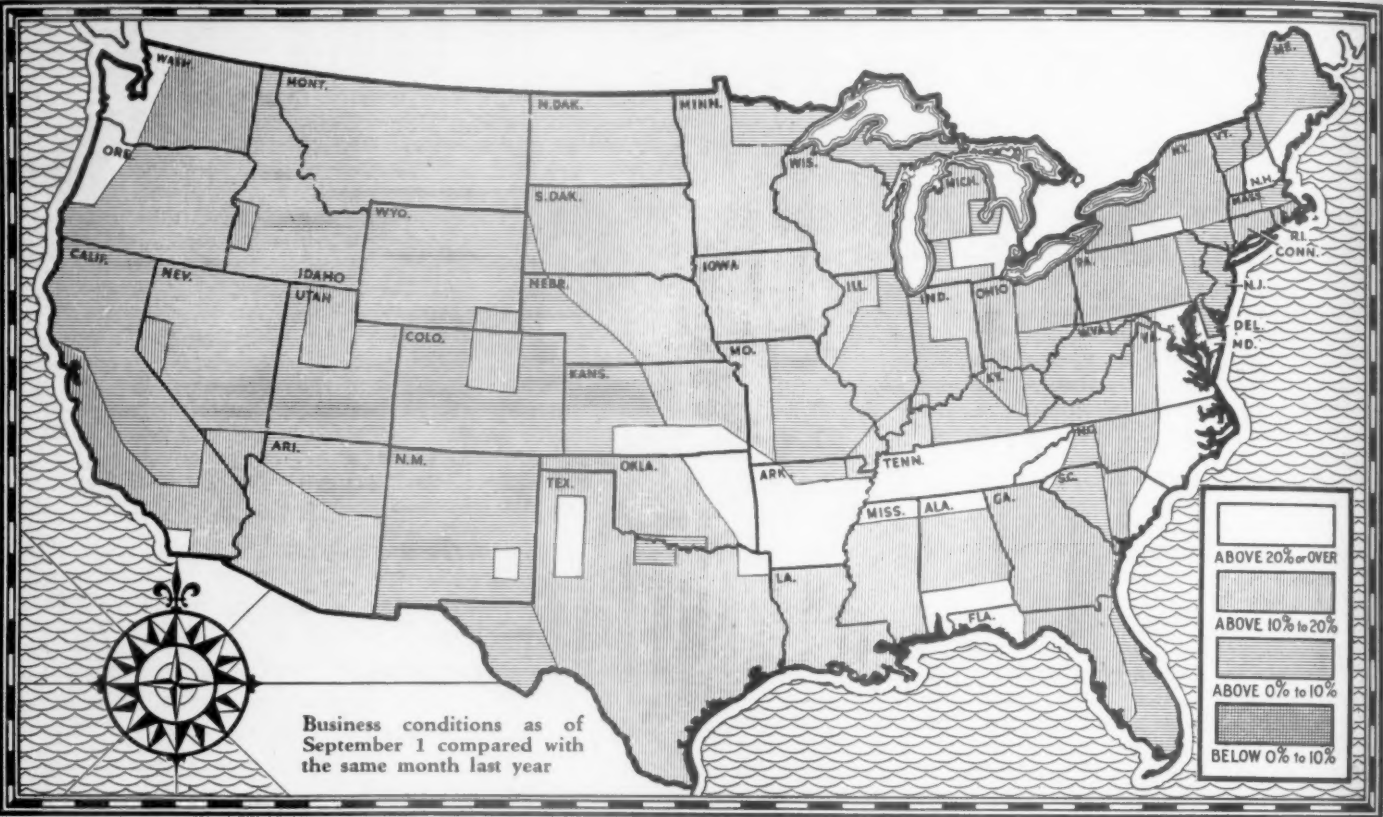
100 EAST 42nd STREET, NEW YORK CITY

Sales Offices in:

BALTIMORE, MD.	CHICAGO, ILL.	CINCINNATI, O.	DENVER, COL.	DETROIT, MICH.	HOUSTON, TEX.	JACKSONVILLE, FLA.	JERSEY CITY, N. J.	KANSAS CITY, MO.
LOS ANGELES, CAL.	MALDEN, MASS.	MEMPHIS, TENN.	NASHVILLE, TENN.	NEW ORLEANS, LA.	OMAHA, NEB.	PASSAIC, N. J.	PHILADELPHIA, PA.	
ST. LOUIS, MO.	ST. PAUL, MINN.	SAN ANTONIO, TEX.	SAN FRANCISCO, CAL.	SEATTLE, WASH.	SYRACUSE, N. Y.	WHEELING, W. VA.	WILKES-BARRE, PA.	

The MAP of the Nation's Business

By FRANK GREENE

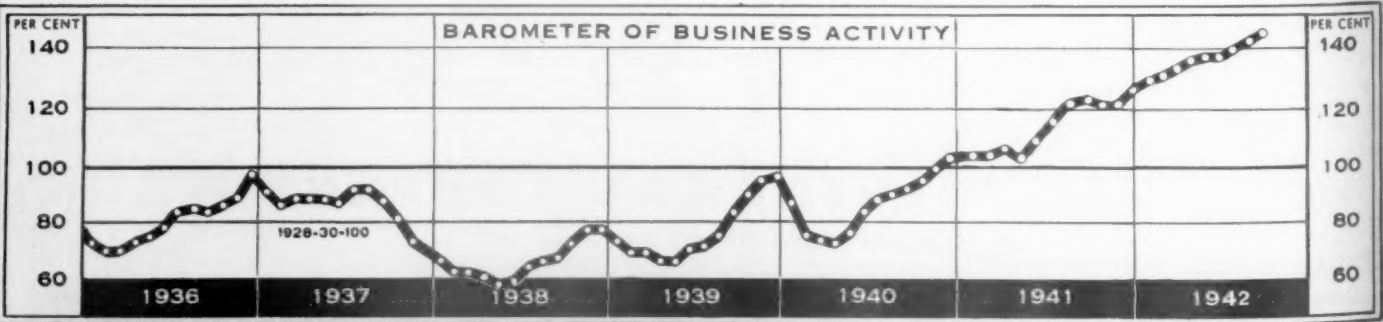
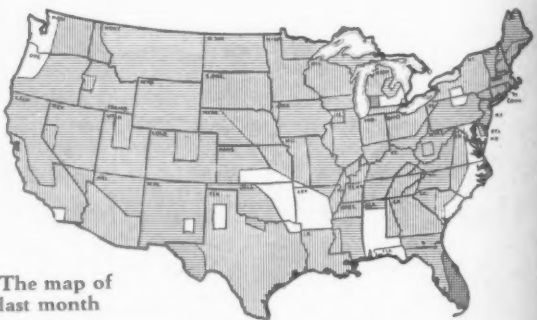


INDUSTRIAL output continued to rise during August despite increasing raw material and labor shortages. Steel, among other materials, was denied to civilians as steel producers struggled with distribution bottlenecks and scrap problems. Production of weapons by the automobile industry exceeded peace-time plant output. Machine tools and shipbuilding felt the effects of allocations in meeting production schedules.

Railroads, 50 per cent occupied with war traffic, handled the heaviest troop and freight movements in history. Electricity output soared 12 per cent above August, 1941, while engineering awards, primarily for war construction, were 50 per cent above last year.

Stock markets practically erased early gains on month-end war news and transactions were few. Farm product prices were slightly higher with farmers facing problems in harvesting and storing bumper crops. Retail sales increased more than seasonally.

The Map reflects continued improvement in purchasing power due to record crops and expanding war activity



Productive activity in leading industries was maintained at or near capacity levels during August and the Barometer chart line continued its upward trend to a further new high record